ANNUAL REPORT

OF THE

CITY ENGINEER

TORONTO

1902

Mr. _____

WITH MR. RUST'S COMPLIMENTS.

ANNUAL REPORT

OF THE

CITY ENGINEER

OF

TORONTO

FOR

1902.

TORONTO:
THE CARSWELL CO., LIMITED, CITY PRINTERS, 28 ADELAIDE STREET EAST.
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TORONTO.

TOPOGRAPHY.—The City of Toronto is situated upon the northern shore of Lake Ontario, about forty miles easterly of its western terminus. It lies in latitude 43° 39′ 10″ north, longitude 79° 23′ west, on a plateau gently ascending north for a distance of three miles, where an altitude of about 220 feet above the lake level is reached. It extends about eight miles along the lake, and is generally level, with slight depressions at points where minor water courses previously existed. The harbor is formed in front of the City by a sandy island, which lies to the south, at a distance of about a mile and a half.

Toronto is the capital of the Province of Ontario, and in it are situated the Provincial Parliament Buildings and Government House, the residence of the Lieutenant-Governor of the Province.

STATISTICS.

AREA.—The area within the City limits, not including the portions of the City land covered by water, is 17.17 square miles.

POPULATION.—The population of the City, according to the census taken by the Directory Company, is 266,989.

PUBLIC STREETS AND LANES.—Within the City limits there are 259.600 miles of streets and 84¼ miles of lanes, of which 194.101 miles are paved, and 65.499 miles unpaved

PAVEMENTS AND ROADWAYS.—

Asphalt	39.75 miles.
Cedar block	70.02 "
Brick	28.73 "
Macadam	54.00 "
Wood on concrete	.67 "
Stone and scoria block	.81 "
Gravel	7.94 "

SIDEWALKS.—

Stone flag	1.821 miles.
Concrete	80.519 "
Brick	3.102 "
Wood	315.000 "

SEWERAGE.—The City is drained by what is known as the combined system of sewers, and there are 234 53 miles of sewers.

WATER WORKS.—The Water Works system is owned and operated by the City, the supply being obtained from Lake Ontario by direct pumping through a 6-ft. steel conduit laid under Toronto Bay to the Main Pumping Station on the water front, the surplus water being pumped through the City mains to the Reservoir situated north of the north City limits. Cost of system to date, about $4,000,000.

STATIONS AND ENGINES.—

Main Pumping Station :

No. 1 Engine, 4,000,000 gals. capacity, 24 hours.
" 2 " 8,000,000 " " "
" 3 " 8,000,000 " " "
" 4 " 10,000,000 " " "
" 5 " 10,000,000 " " "

High Level Pumping Station.—Two engines with a total capacity of 6,000,000 gallons in 24 hours.

Island Pumping Station.—One engine, 500,000 gallons capacity in 24 hours.

264.46 miles of water mains.
47,401 water services
3,119 street hydrants
2,452 valves
1,830 meters in use.

WATER RATES.—Average schedule, 2½ cents per 1,000 gallons, and by meter, 10c. per 1,000 gallons.

40,000 water takers.
Pressure—Domestic and fire, 75 to 90 lbs.
Average quantity pumped in 24 hours, 22,901,140.
Water supplied annually, 7,993,916,325 gallons.
Fuel used—soft coal screenings.
Cost of fuel during 1902, $49,748.41.

General receipts, constructing and moving services, etc	$ 15,988 59
Revenue collected in 1902 by schedule rate	167,710 65
" " " " meter rate	129,550 78
Charges made against different branches of City service for water used	54,231 00
Total	$367,481 02

Operating expenses, including cost of collecting rates and debt charges	$398,098 73
House services and pipe laying	67,968 11
Total	$466,066 84

FIRE PROTECTION.—

195 officers and men in brigade.
65 horses.
59 pieces of apparatus for various purposes.
3,119 fire hydrants.
16 fire stations.
5 steam fire engines.

POLICE PROTECTION.—

310 officers and men.
1 headquarters and 7 stations.

MILITARY.—There are two regular corps stationed in the City (one mounted and one infantry), at Stanley Barracks, near the site of old Fort Rouille, and five militia corps (two mounted and three infantry), four of which have first-class bands and the use of well-equipped and commodious Armouries.

LIGHTING.—There are 4 lighting companies doing business in the City. The Consumers' Gas Co. have 277 miles of mains, and 33,677 consumers. Carbon Light & Power Company have 911 street lights. Toronto Electric Light Company have 1,220 street electric arc lights, 550 private business arc lights, about 100,000 private business incandescent electric lights, and also 960 miles of overhead and underground wire, and 50 miles of underground conduit.

TELEPHONE AND TELEGRAPH SERVICE.—The Bell Telephone Company is the only company doing business in the City. They have 11,000 telephones in use, 9,984 miles of overhead, 14,976 miles of underground wires, 71,651 feet of underground conduit, and 723,623 feet of ducts.

There are two telegraph companies doing business in the City, the Great North-Western Telegraph Company, with 70 sets of instruments and 250 miles of overhead wires; and the Canadian Pacific Railway Telegraph Company.

PUBLIC PARKS.—The Public Parks of the City are under the control of the City Council. There are 21 public parks, having a total area of about 1,329 acres.

EDUCATION.—The educational system is under the direction of the Public School Board, the Collegiate Institute Board, and the Separate School Board. There are 59 public schools, having a total of 585 rooms, with a staff of 684 principals and teachers. Three collegiate institutes with a staff of 31 principals and teachers. Eighteen separate schools with a staff of 99 principals and teachers.

3 Industrial Schools (Protestant.)
2 Industrial Schools (R. C.)
30 Colleges, Seminaries and Pay Schools.
1 Technical School.
4 Universities.
3 Cathedrals of all denominations.
209 Churches of all denominations.
1 Synagogue.
48 Missions.
5 Mission Training Schools.
9 Convents.

PUBLIC LIBRARY.—There is one Central Reference and Circulation Public Library, and six Circulation Libraries, all under the control of the Public Library Board. There are 117,127 volumes in circulation.

PUBLIC INSTITUTIONS.—

62 Hospitals, Asylums and Public Homes.
3 Institutions for destitute and criminal classes.

LAW.—Toronto is the centre of the Law System of the Province of Ontario, having 27 Law Courts within its limits.

AMUSEMENTS.—

5 Theatres.
22 Music and Concert Halls.
238 Public Buildings, Halls, etc.

PUBLIC ACCOMMODATION.—

184 Hotels.
2,400 Boarding Houses.

RAILWAYS.—There are two railway companies whose systems enter Toronto, namely: the Grand Trunk Railway, with about 85 miles of tracks laid in the City limits.

The Canadian Pacific Railway Company, with about 31 miles of tracks laid in the City limits.

94 Passenger trains enter and leave the City daily.

180 Freight trains enter and leave the City daily.

The Toronto Railway Company has the exclusive franchise for operating a street railway system within the City limits. They have 90 114 miles of tracks, about 305 cars in operation, and carried 44,437,678 passengers during 1902.

BUSINESS.—

6 daily newspapers; 49 weekly; 20 semi-monthly; 76 monthly, and 8 quarterly newspapers and periodicals; two directory companies.

5 Public markets.
30 Banks, not including branches.
700 Factories and manufactories.
370 Wholesale houses.
2 Departmental stores.
6,300 Miscellaneous business companies, corporations and stores.

SANITATION.—

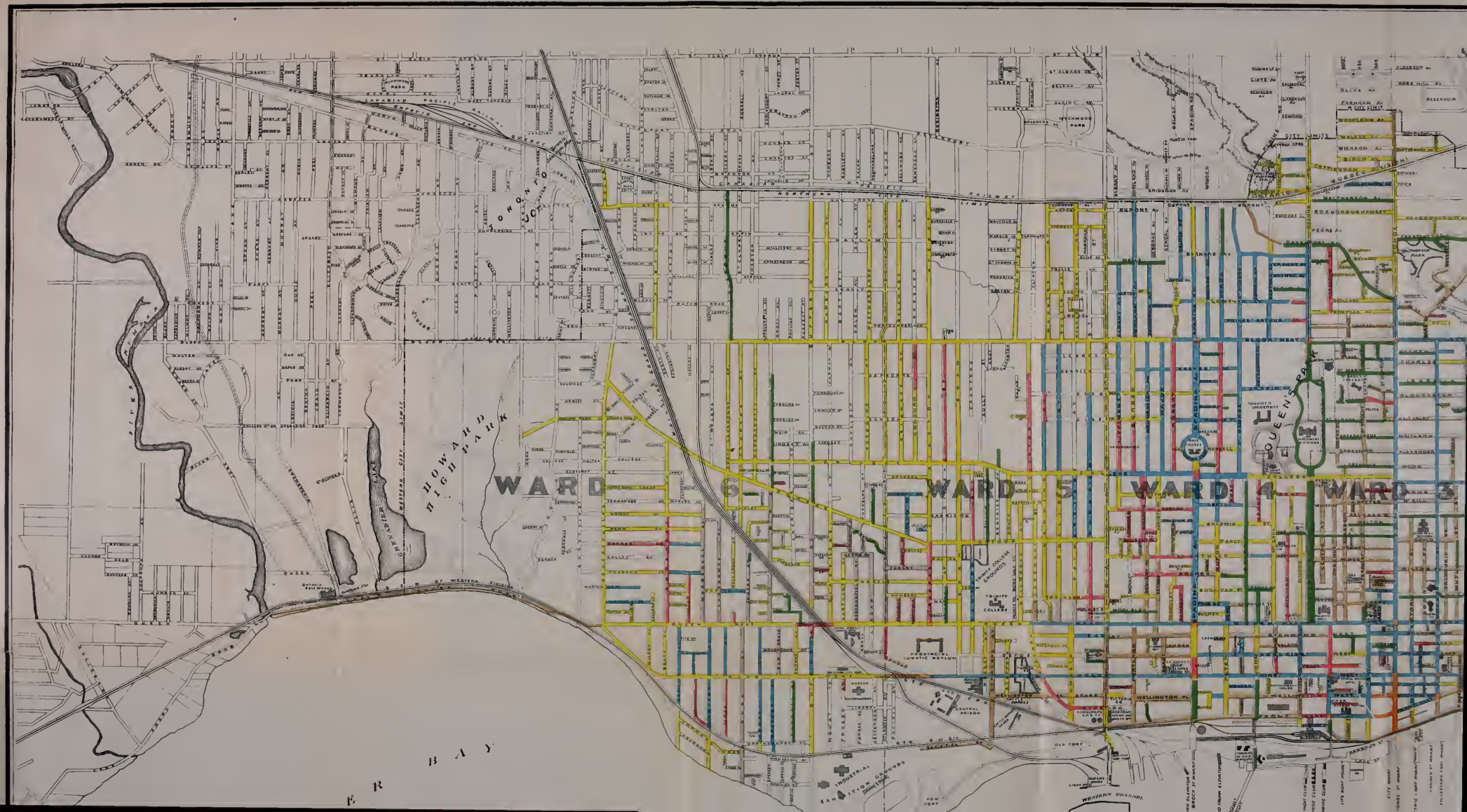
Street Cleaning, Watering and Scavenging.—A modern and complete system of street cleaning, watering and scavenging is owned and operated by the City.

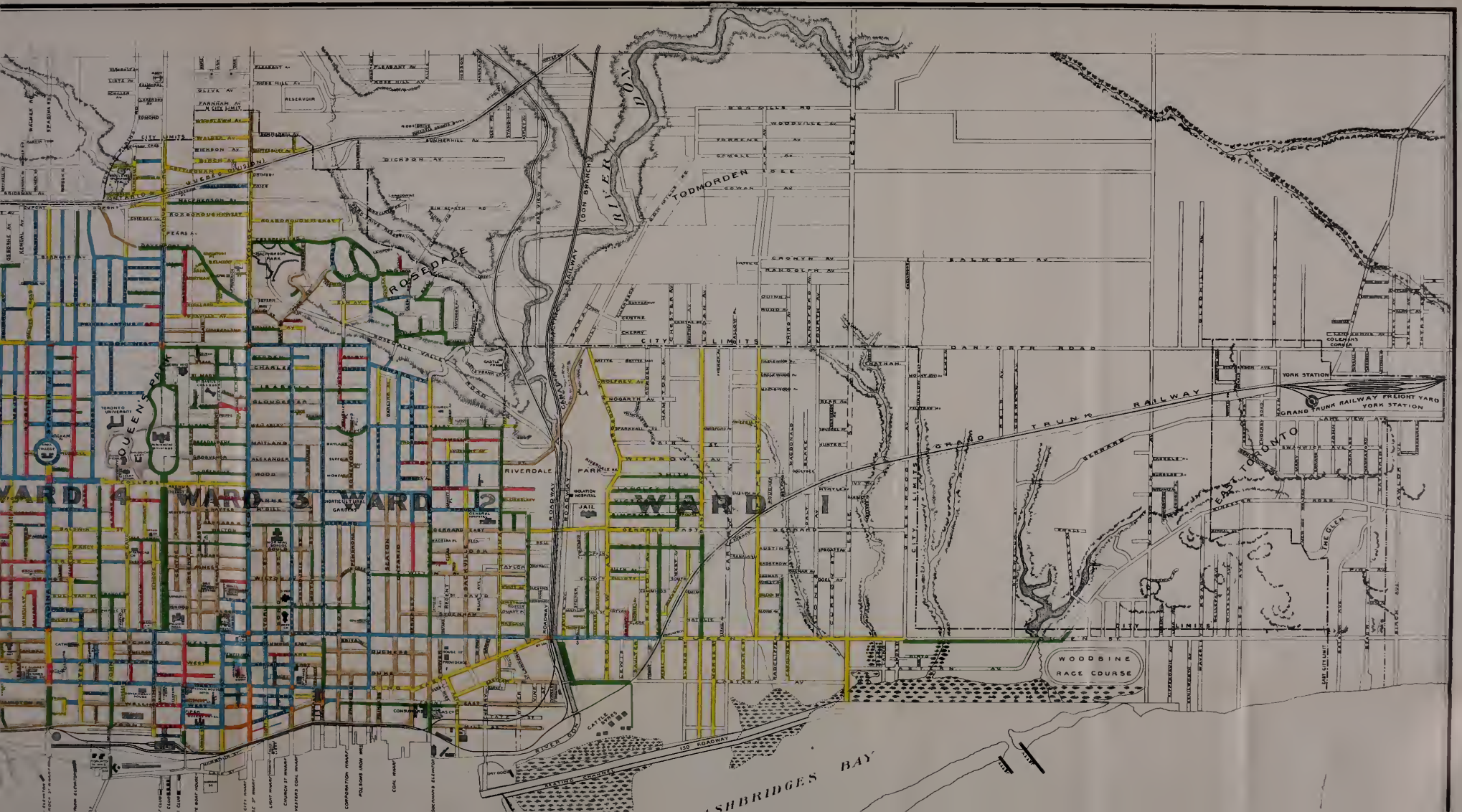
The supervision of the sanitary requirements of the City is under the control of a Local Board of Health.

PAST CITY ENGINEERS OF TORONTO.—

1840-1842, Thomas Young.
1843-1852, John G. Howard.
1853, William Thomas.
1854, John G. Howard.
1855, William Kingsford.
1856, Thomas H. Harrison.
1857-1858, Thomas Booth.
1859-1860, Alfred Brunel.
1861-1870, J. H. Bennett.

1871-Oct., 1875, Chas. W. Johnston.
Oct., 1875-July, 1880, Frank Shanly.
Sept., 1880-July, 1883, R. J. Brough.
Oct., 1883-1889, Charles Sproatt.
1890-Sept., 1891, W. T. Jennings.
Sept., 1891-May, 1892, Granville C. Cunningham.
May, 1892-Jan., 1898, E. H. Keating.


WARD 6
WARD 5
WARD 4
WARD 3
HOWARD PARK
QUEEN'S PARK
TRINITY COLLEGE GROUNDS
TRINITY COLLEGE
PROVINCIAL LUNATIC ASYLUM
CENTRAL PRISON
INDUSTRIAL EXHIBITION GROUNDS
OLD FORT
WESTERN CHANNEL
TORONTO JUNCTION
CANADIAN PACIFIC RAILWAY
NORTHERN PACIFIC RAILWAY
TORONTO CITY LIMITS
WESTERN CITY LIMITS
B A Y


WARD 4
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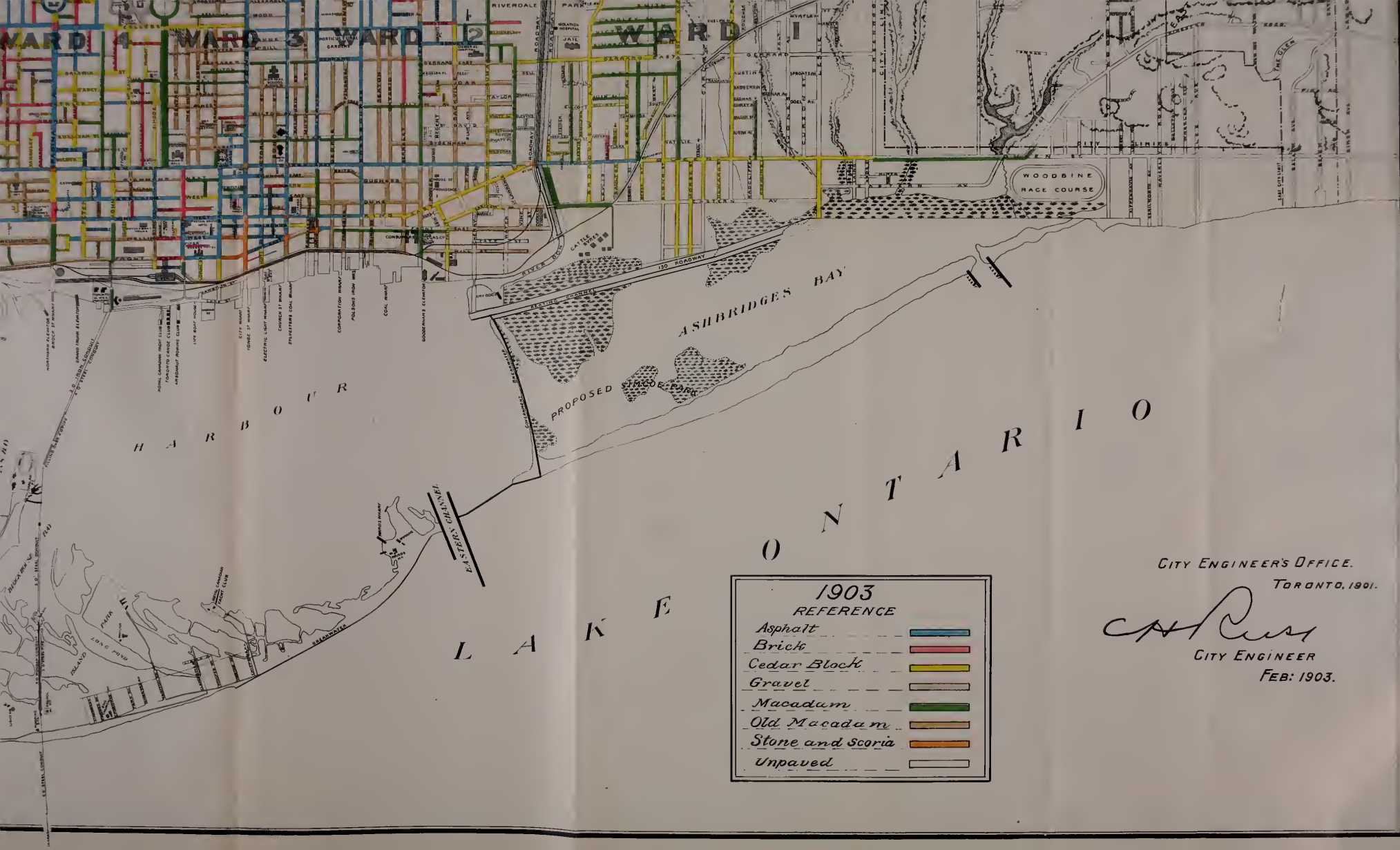
QUEEN'S PARK
RIVERDALE PARK
ROSEDALE
RIVERDALE
DON RIVER
TODMORDEN BRANCH
TODMORDEN
DANFORTH ROAD
GRAND TRUNK RAILWAY
YORK STATION
GRAND TRUNK RAILWAY FREIGHT YARD
YORK STATION
EAST TORONTO
THE GLEN
WOODBINE RACE COURSE
ASHBRIDGES BAY
RIVERDALE ROADWAY
130 ROADWAY
CITY LIMITS
EAST CITY LIMIT
JAIL
ISOLATION HOSPITAL
HORTICULTURAL GARDENS
CATTLE YARDS
COLEMAN CORVEA

HUMBER BAY
PLAN
OF THE
CITY OF TORONTO
PROVINCIAL LUNATIC ASYLUM
TRINITY COLLEGE
TRINITY COLLEGE GROUNDS
INDUSTRIAL EXHIBITION GROUNDS
CENTRAL PRISON
WESTERN CHANNEL
HARBOUR
BAY
ISLAND PARK
LONG POND


WARD 4
WARD 3
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WARD 1
RIVERDALE PARK
WOODBINE RACE COURSE
ASHBRIDGES BAY
PROPOSED STRACHAN PARK
HARBOUR
LAKE ONTARIO
EASTERN CHANNEL
1903
REFERENCE
Asphalt
Brick
Cedar Block
Gravel
Macadam
Old Macadam
Stone and Scoria
Unpaved
CITY ENGINEER'S OFFICE.
TORONTO, 1901.
CITY ENGINEER
FEB: 1903.

ANNUAL REPORT

OF THE

CITY ENGINEER

OF THE

CITY OF TORONTO

FOR THE YEAR 1902.

CITY ENGINEER'S OFFICE,
Toronto, December 31st, 1902.

To His Worship the Mayor and Members of the Council of the Corporation of the City of Toronto:

GENTLEMEN,—In compliance with By-law No. 2534, I have the honor to lay before you the Annual Report of the Department for the year ending 31st December, 1902, setting forth the various works carried out during the year, with details of cost of construction, etc.

OFFICIAL STAFF.

The following is a list of the chief officials of the Department:

City Engineer and Chief Engineer and Manager of the Water Works	Charles H. Rust, M. Can. Soc. C.E., M. Am. Soc. C.E.
Deputy City Engineer	C. L. Fellowes.
Asst. Engineer	C. W. Dill, Ass. M. Can. Soc. C.E.
Asst. Engineer	J. Williams, M. Can. Soc. C.E.
Asst. Engineer	W. A. Clement, M. Can. Soc. C.E.
Street Commissioner	John Jones.
Assistant Street Commissioner	Wm. J. Evans.
Accountant	Wm. McCartney.
Chief Clerk	E. P. Roden.
Secretary Committee on Works	A. H. Clarke.
Secretary to City Engineer	Geo. J. Castle.
Chief Engineer Main Pumping Station	Alex. McRae.
Chief Engineer High Level Pumping Station	Thos. Walsh.
Foreman of Water Works Construction	Edward Foley.

WATER WORKS.

For Water Works matters see separate report.

WORKS DEPARTMENT.

FINANCIAL.

During the year the total expenditure of the Works Department, not including Water Works, was $979,424.22, which was divided as follows:

General and special works	$369,408 81
Street railway track allowance pavements	23,631 15
Local improvements	526,583 46
Bridges, subways, etc.	2,100 38
Departmental and sundry accounts	57,700 42
Total	$979,424 22

The amount expended for Local Improvement Works was divided as follows:

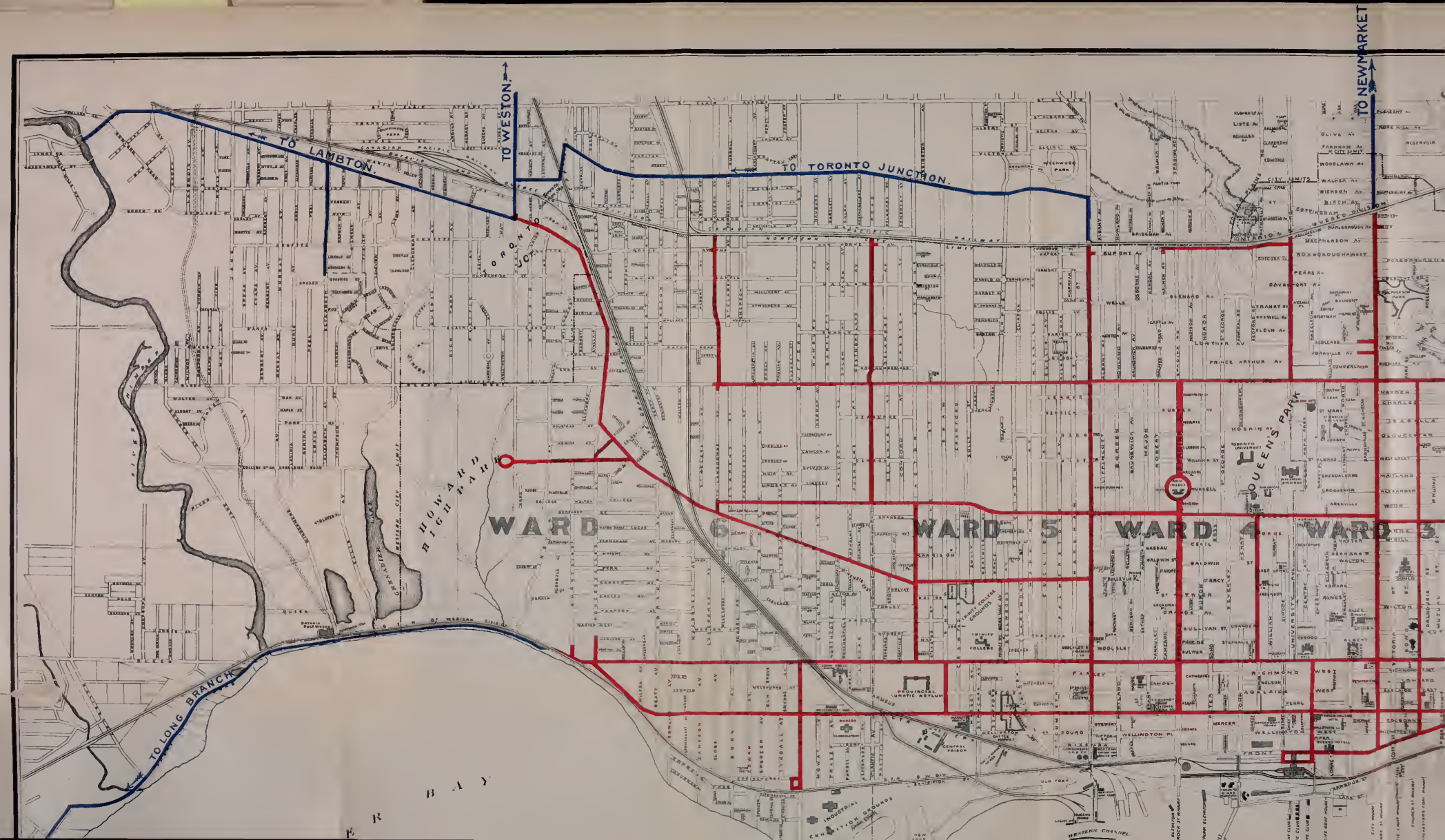
Pavements and roadways	$379,525 20
Concrete and brick sidewalks	123,276 11
Plank sidewalks	14,273 23
Sewers	9,508 92
Total	526,583 46

The amount expended in 1901 was $449,687.94, showing an increase of 15½ per cent. for 1902 over 1901. The total amount expended by the Department during the year, including Water Works expenditure, was $1,153,016.28.

STREET RAILWAY MATTERS.

During the year, a monthly record was kept of the service provided by the Toronto Railway Company upon the various routes, for the purpose of ascertaining if the Company were carrying out the time-table recommended by this Department and adopted by the City Council.

The time-table prepared in 1900 did not prove altogether satisfactory, and the number of passengers carried being greatly increased, a new time-table was prepared during the month of December of this year.


TO LAMBTON.
TO WESTON.
TO TORONTO JUNCTION.
TO NEWMARKET
TO LONG BRANCH.
WARD 6
WARD 5
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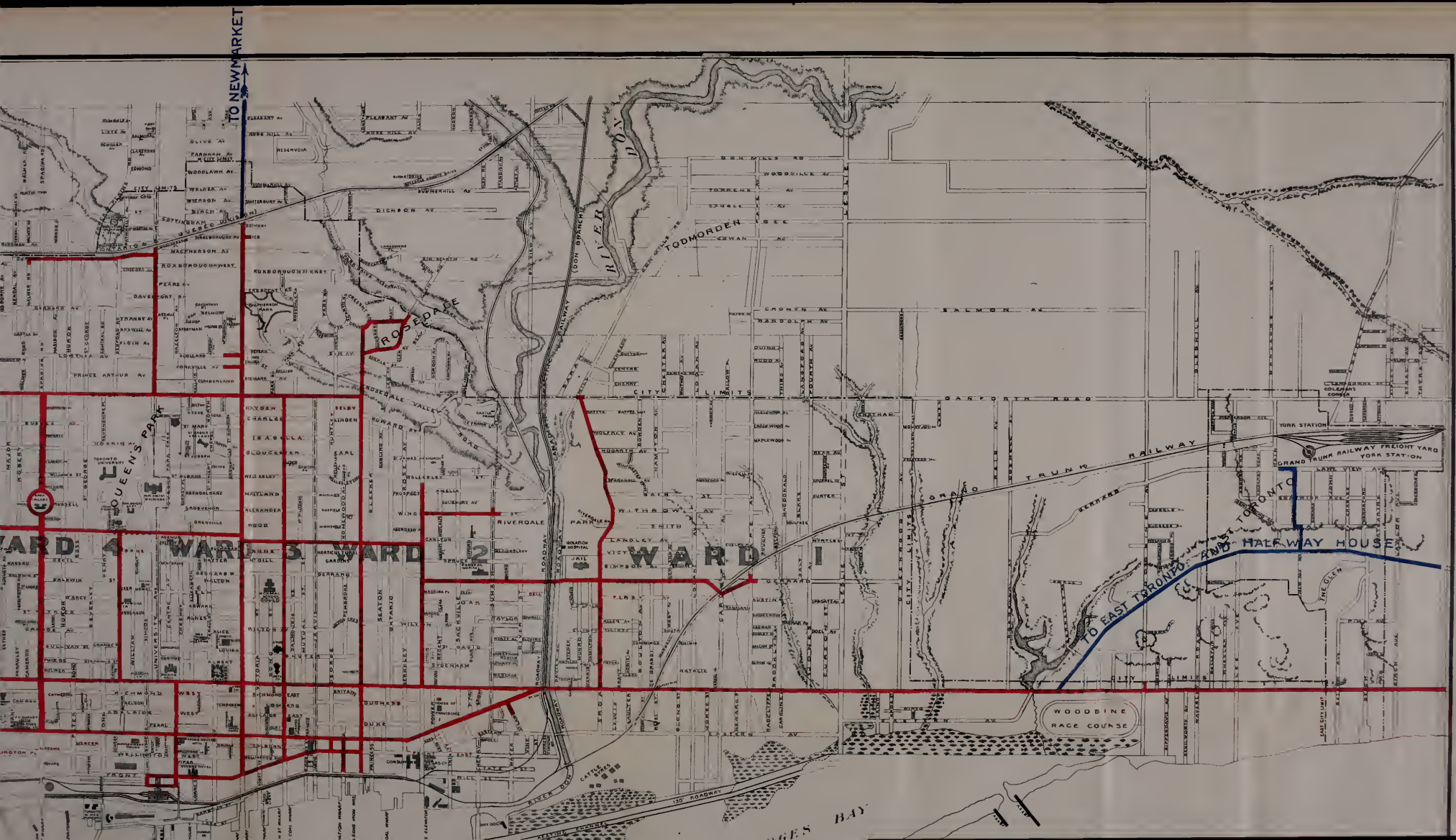
WARD 3
HOWARD PARK
QUEEN'S PARK
TORONTO
BAY


TO NEWMARKET
RIVER D.V.
TODMORDEN
ROSEDALE
QUEEN'S PARK
WARD 4
WARD 3
WARD 2
WARD 1
RIVEROALE
TO EAST TORONTO
AND HALFWAY HOUSE
WOODBINE RACE COURSE
GRAND TRUNK RAILWAY FREIGHT YARD
YORK STATION
GRAND TRUNK RAILWAY
CANADIAN PACIFIC RAILWAY
DANFORTH ROAD
PALMERSTON AV
BAYVIEW AV
THE GLEN
130' ROADWAY

PLAN

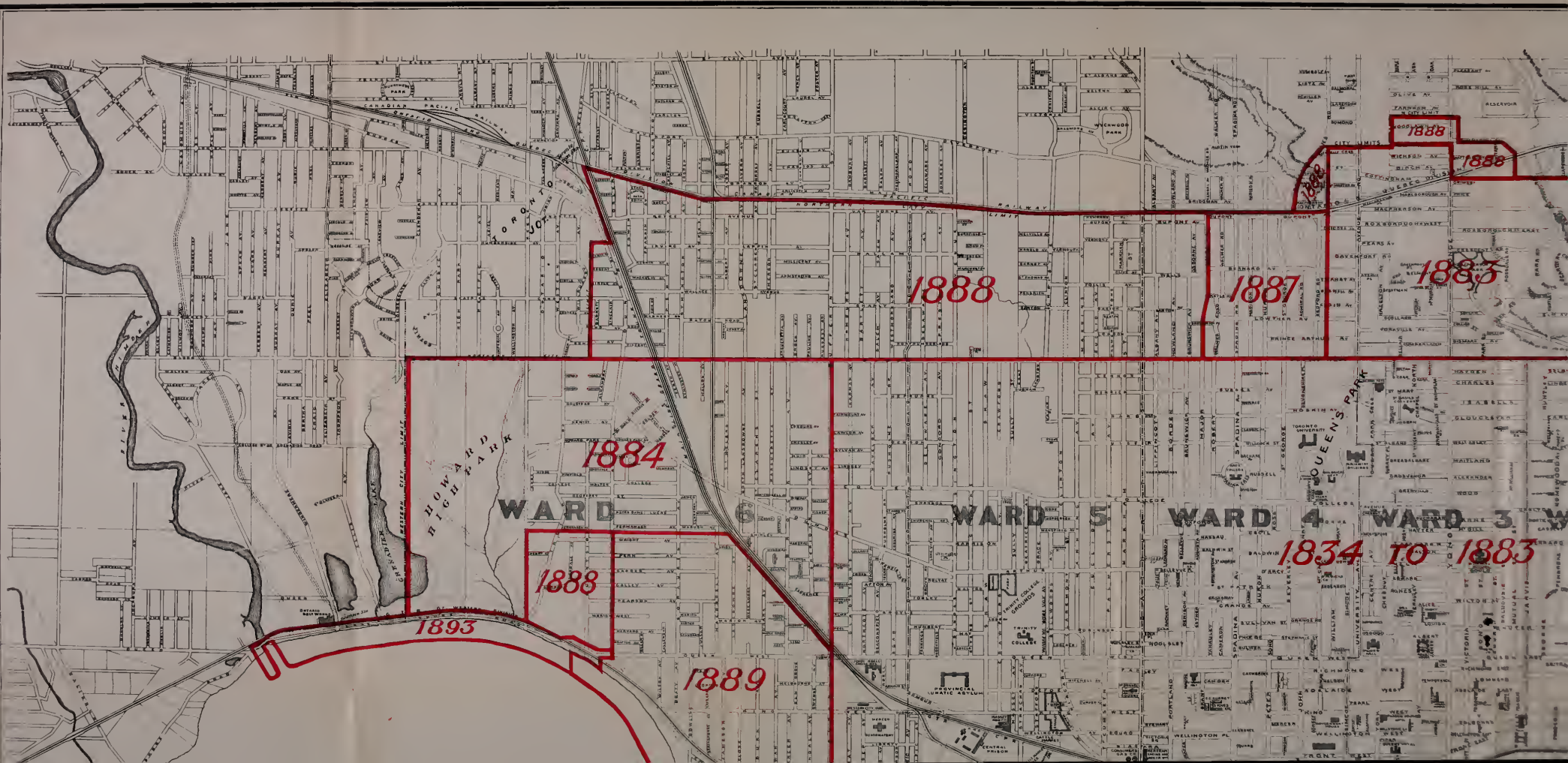
OF THE

CITY OF TORONTO

NOTE = THE RED LINES DENOTE TORONTO RAILWAY Co

" " BLUE " " SUBURBAN " "

TO EAST TORONTO
WOODBINE RACE COURSE
RIVER DON
CATTLE SHEDS
DRY DOCK
130 ROADWAY
ASHBRIDGES BAY
PROPOSED ISLAND PARK
HARBOUR
LAKE ONTARIO
EASTERN CHANNEL
ISLAND PARK
LONG POND
BREAKWATER
CITY ENGINEER'S OFFICE.
TORONTO, 1901.
CITY ENGINEER
FEB: 1903.


1888
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WARD 6
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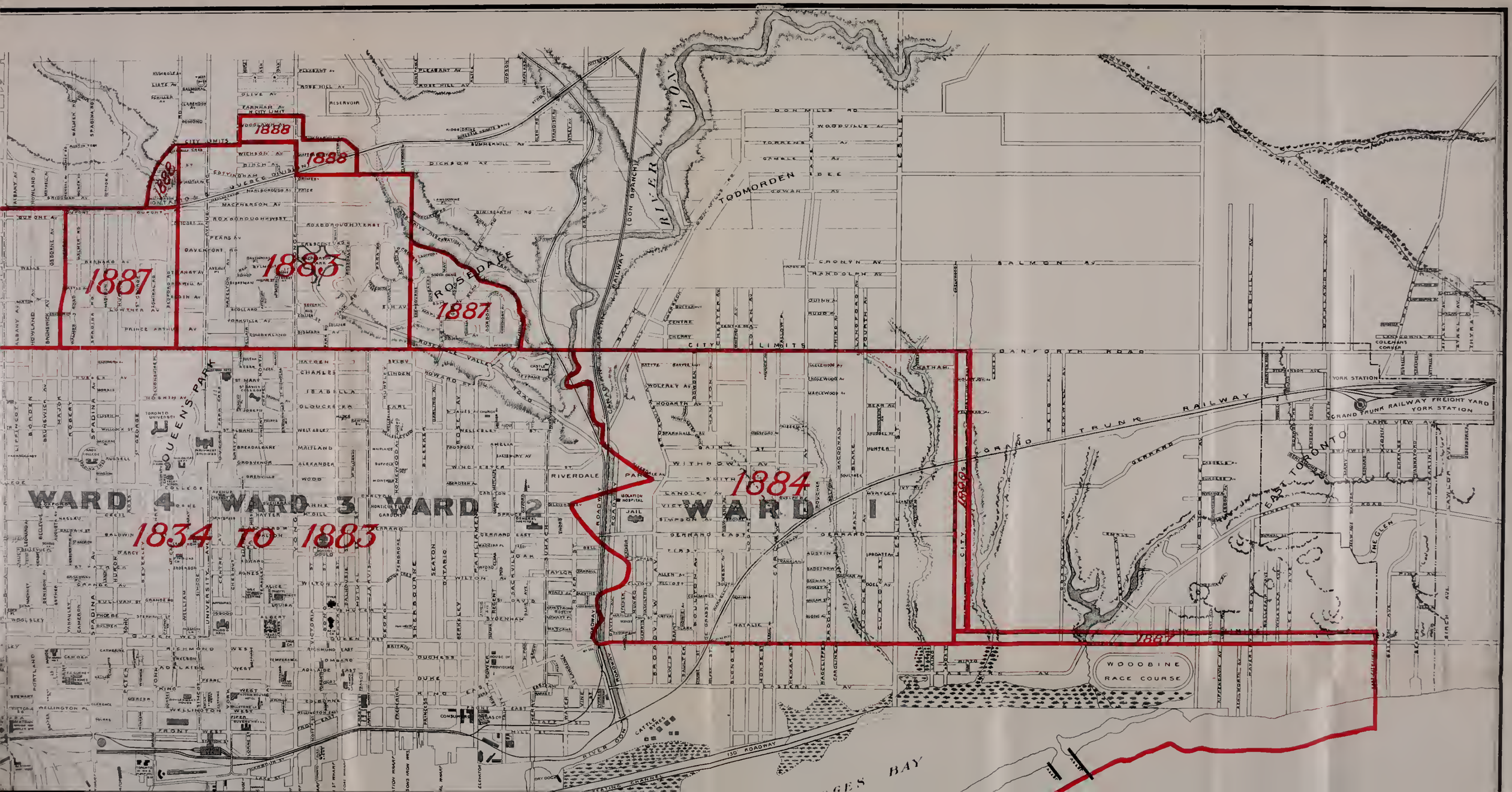
WARD 5
WARD 4
WARD 3
1834 TO 1883
HOWARD PARK
QUEEN'S PARK
CANADIAN PACIFIC RAILWAY
TORONTO JUNCTION
NORTHERN PACIFIC JUNCTION RAILWAY
CITY LIMITS
PROVINCIAL LUNATIC ASYLUM
CENTRAL PRISON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WARD 1
1834 TO 1883
CITY LIMITS
CITY LIMITS
RIVERDALE PARK
QUEEN'S PARK
ROSEDALE
TODMORDEN
DON RIVER
DANFORTH ROAD
GRAND TRUNK RAILWAY
YORK STATION
GRAND TRUNK RAILWAY FREIGHT YARD
YORK STATION
EAST TORONTO
WOODBINE RACE COURSE
RIVER DON
ESPLANADE
FRONT
QUEEN
KING
DUNDAS
GERRARD
BLOOR
BAYVIEW AVE
LESLIE
BROADVIEW AVE
PARLIAMENT
SHERBOURNE
YONGE
SPADINA
UNIVERSITY AVE
BATHURST
DUFFERIN
DOVERCOURT
OSSINGTON
DUFFERIN
DOVERCOURT
OSSINGTON
CHRISTIE
DUPONT
DAVENPORT
ST CLAIR
ST CLAIR
EGLINTON
EGLINTON
LAWRENCE
LAWRENCE
YORK MILLS
YORK MILLS
SHEPPARD
SHEPPARD
FINCH
FINCH
BAYVIEW AVE
BAYVIEW AVE
LESLIE
DON MILLS RD
DON MILLS RD
LESLIE
LAKE SHORE BLVD
LAKE SHORE BLVD
LAKE VIEW AVE
LAKE VIEW AVE
THE GLEN
THE GLEN
BROADVIEW AVE
BROADVIEW AVE
PARLIAMENT
PARLIAMENT
SHERBOURNE
SHERBOURNE
YONGE
YONGE
SPADINA
SPADINA
UNIVERSITY AVE
UNIVERSITY AVE
BATHURST
BATHURST
DUFFERIN
DUFFERIN
DOVERCOURT
DOVERCOURT
OSSINGTON
OSSINGTON
CHRISTIE
CHRISTIE
DUPONT
DUPONT
DAVENPORT
DAVENPORT
ST CLAIR
ST CLAIR
EGLINTON
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YORK MILLS
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OSSINGTON
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CHRISTIE
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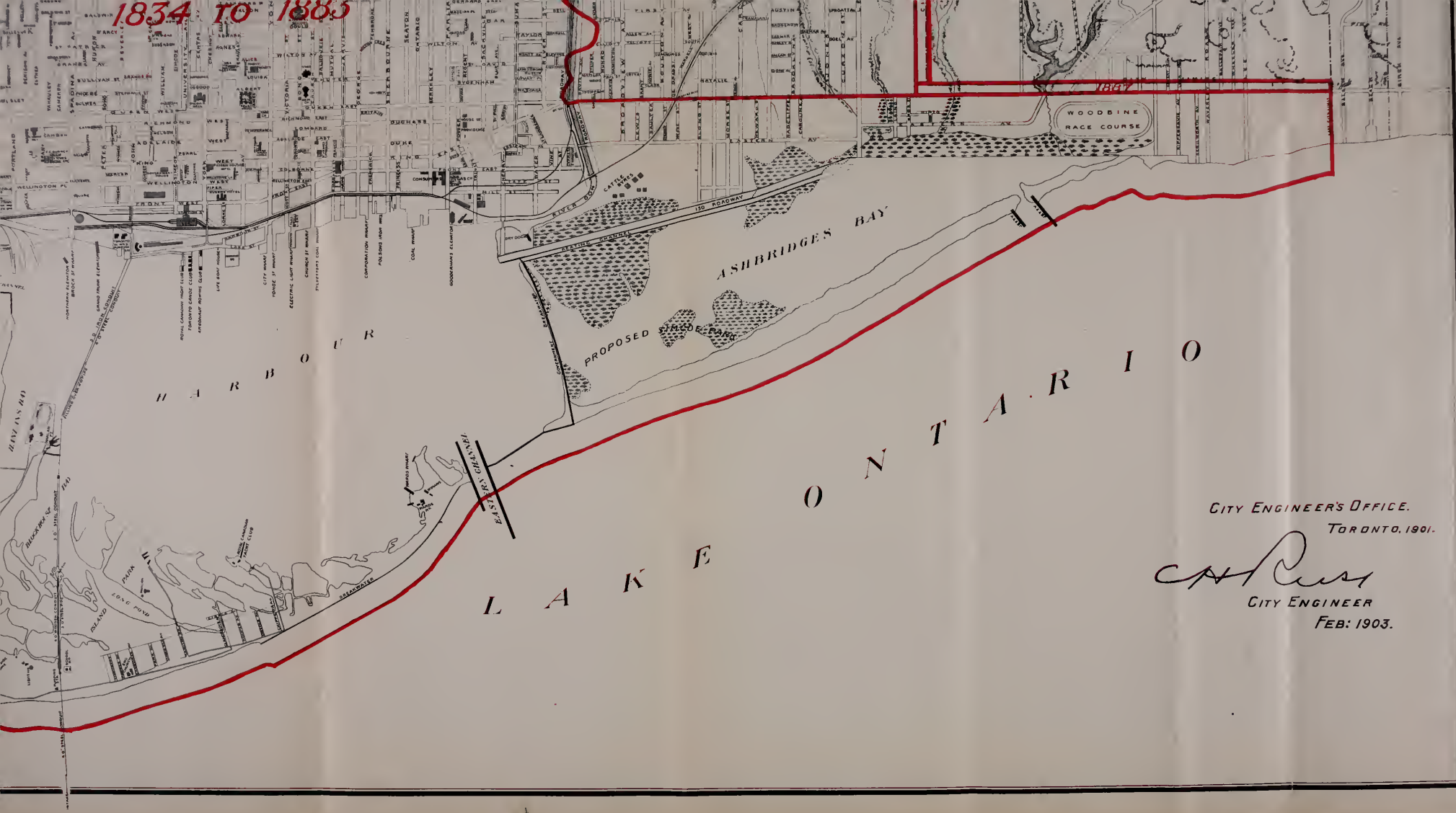
DUPONT
DUPONT
DAVENPORT
DAVENPORT
ST CLAIR
ST CLAIR
EGLINTON
EGLINTON
LAWRENCE
LAWRENCE
YORK MILLS
YORK MILLS
SHEPPARD
SHEPPARD
FINCH
FINCH

1834 TO 1883
1888
1893
1889
HUMBER BAY
PLAN
OF THE
CITY OF TORONTO
Plan shewing dates of various annexations since 1883


1834 TO 1883
1867
WOODBINE RACE COURSE
ASHBRIDGES BAY
PROPOSED FLOOD BANK
HARBOUR
LAKE ONTARIO
EASTERN GAP
CITY ENGINEER'S OFFICE.
TORONTO, 1901.
CITY ENGINEER
FEB: 1903.

During the year, a double line of street railway tracks were laid on Dupont Street, from Avenue Road to Walmer Road, T rails, weighing 60 lbs. to the yard, in 60-foot lengths, with cast-welded joints, being used.

New pavements were constructed on the track allowance upon sections of the following streets, the old pavements being worn out: Dundas Street, Avenue Road, Howard Park Avenue, Queen Street, Carlton Street and Winchester Street.

In reference to the pavement upon Winchester Street track allowance, the old asphalt, which was laid on a concrete foundation, had become disintegrated, and it was removed and replaced with concrete, finished in a manner somewhat similar to concrete walks. This material was used on the track allowance upon King Street, five years ago, and has given good satisfaction. The result of using concrete between the tracks has been to largely reduce the cost of paving track allowances.

During the year the Toronto Railway Company erected 186 standard iron poles.

In connection with the proposed inter-urban railways, I prepared a report and submitted it to the City Council, suggesting certain streets over which the proposed lines should enter the City. Mr. W. T. Jennings, M.I.C.E., was also requested by the City Council to report on the same subject. The difficulty so far in arriving at a settlement of this important matter, has been the desire of the Toronto Railway Company to obtain an extension of their present franchise.

I am of opinion that the time has arrived when considerable extension should be made to the street railway system. Another cross-town line is required and additional lines are also necessary to relieve the traffic on Queen and Yonge Streets. There is no doubt that a re-arrangement of some of the lines would result in a better service, but it has been found extremely difficult to change a route that has been in use for several years. It would be advisable to run the cars on a number of the present routes to the main lines, and issue transfers, instead of running all lines to the central portion of the City. This would permit of more cars being placed on the main lines, thus relieving the overcrowding.

TELEPHONE, ELECTRIC LIGHT AND OTHER POLES AND WIRES.

I regret very much that no further progress has been made towards removing from the streets the unsightly poles and wires which are owned by the different companies, and I trust that very soon the members of the Council will see the advisability of applying for legislation which will enable the City to better control the various electrical companies in this respect.

SIGNS.

Another source of danger on the principal streets is the unsightly overhanging signs, and I am of opinion that the Council should consider this matter, and, if necessary, pass a By-law prohibiting the erection of such signs, especially in the central portion of the City. The various owners might also be given three months in which to remove all existing signs from the main streets.

SEWAGE DISPOSAL, EAST OF THE WOODBINE.

At the request of a large number of property owners in that section of the City lying east of the Woodbine, plans were prepared for a system of sewage disposal in that section. As this district of the City is only a few feet above the level of the Lake, the matter required considerable care and attention. It was deemed inadvisable to discharge the sewage into the Lake, and therefore the bacterial method of sewage disposal was proposed, septic tanks and contact beds to be used. It was also found that it would be necessary to lift all the sewage. After plans were prepared, however, a number of the large property owners concerned found that the cost would be more than they could afford, and the proposal was petitioned against.

In connection with this scheme it was deemed advisable to obtain a correct estimate of the population, number of houses, baths, etc., and the annual approximate quantity of water consumed in this section of the City. The following statement shows the results obtained:

Population.	Houses.	Closets.	Baths.	Taps Outside.	Taps Inside.	Water Consumed per Year, about
1,152	235	25	36	106	295	7,034,000 imp. gals.

HARBOR MATTERS.

Although the attention of the Dominion Government has on several occasions been called to the shallow depth of water at the

BREAKING UP OF DON. BLOCKING OF WINCHESTER STREET.

east end of the Harbor, caused by silt deposited by the River Don during Spring freshets, nothing has yet been done to render this section of the Bay navigable for large vessels. The Government consider that the River Don does not come under their jurisdiction, being under the control of the City; and further, that the present condition of the Bay has resulted from the number of City sewers which discharge therein. The Government have further stated that unless the City will undertake to dispose of this nuisance, they are not prepared to dredge the Harbor.

SEWAGE DISPOSAL.

I regret to again have to report that no progress has been made towards getting rid of the sewage which is at present emptied into the Bay. The matter has been before the Council on several occasions, but owing to the Medical Health Officer and myself holding divergent views as to the proper method of disposing of it, no progress has been made. I am still of the opinion that there would be no danger in discharging the sewage into the Lake, nine miles east of the Water Works intake pipe, but I understand that the Provincial Board of Health (who claim that the method of disposal must be approved by them before adoption) would object to this system.

In view of the large saving which would be effected by the adoption of this method of disposing of the sewage, I suggest the advisability of consulting one or two prominent Engineers, so that their views upon this question may be obtained.

DREDGING.

The City dredge, "Daniel Lamb," was employed during the season in dredging the channel from Ashbridge's Bay to Toronto Bay, and Shields' Cut leading from Ashbridge's Bay to the Lake; also in dredging and improving the waterways at the Island. In my opinion, an additional dredge should be acquired by the City, as I am satisfied that the value of the land which could be reclaimed at the Island would more than compensate the City for its cost.

WATER FRONT.

Although the water front is not directly under the control of this Department, I feel it my duty to call the attention of the Council to its unsightly condition. The City owns some valuable property in this vicinity, which at present is bringing in very little revenue, and in my opinion steps should at once be taken to erect docks and

wharves, and also have part of the water front reserved as a small park for the use of the citizens.

I suggest the advisability of constructing a boulevard, 200 feet wide, from Bathurst Street, along the Lake Shore opposite High Park, the work to be carried out gradually during a number of years. This would be a very convenient place to deposit street sweepings, etc. Owing to the completion of the new wharves, all material of this nature has to be hauled to Ashbridge's Marsh, which considerably increases the cost of street cleaning.

ISLAND MATTERS.

The creation of the Island Committee has somewhat complicated the work of this Department, as all matters pertaining to the Island, which were formerly under the charge of the Committee on Works and this Department, such as water supply, construction of sidewalks, etc., are now under the control of the Island Committee; and reports regarding Island matters have to be made direct to this latter Committee.

During the year this Department erected a small Destructor at the Island, at a cost of $2,276.37, which has proved so far satisfactory and is a decided improvement over the old method of burying all night soil, garbage, etc.

It will be necessary in a short time to consider the question of a proper sewerage system for the Island, which has become a very popular Summer Resort, there being now between 250 and 300 houses there. As the Island residents are now supplied with City water, it will be necessary to deal with the sewerage question in the near future.

ROADWAYS AND SIDEWALKS.

During the year 19 contracts, awarded in 1901, 206 contracts awarded in 1902, and 70 day labor works, were carried out and the construction of 48 private permanent sidewalks superintended, making in all 324 works completed during the year. This is an increase of 96 over 1901, and is the largest number of works of this character completed in any one year.

The foregoing works comprised 17.41 miles of pavements and 27.4 miles of concrete and brick walks.

HOWLAND ROAD, TAR MACADAM.

McKENZIE CRESCENT, TAR MACADAM.

The construction of such a large mileage of pavements and sidewalks has had a very beneficial effect, and the property owners are beginning to realize how greatly these improvements enhance the value of the abutting property.

The contractors and this Department have been somewhat hampered during the year, owing to the difficulty experienced in procuring material, caused partly by the inability of the railway companies to supply sufficient cars for the delivery of stone, cement, etc. To overcome such difficulties in the future, I am of opinion that the City should own and operate a stone quarry.

The Department has, during the past year, continued the practice of tendering on all works, and our tenders were the lowest on 51 contracts; 19 concrete sidewalks, for which the tenders of the American firm of Stamsen & Blome, of Chicago, were the lowest, were afterwards awarded to us by Council to be constructed by day labor.

In connection with these works, including those proposed, but not carried out, 125 plans and 482 estimates were prepared.

ASPHALT PAVEMENTS.

At the commencement of the year only two companies were tendering for the construction of asphalt pavements, both using Trinidad Pitch Lake asphalt. In June last, a new firm of contractors entered the field, whose tenders were for the use of Acme California asphalt in the construction of pavements. The advent of the new company resulted in a very large decrease in the cost of constructing asphalt pavements.

CEDAR BLOCK PAVEMENTS.

An appreciable decrease has taken place in the mileage of cedar block pavements, both in the construction of new pavements and the renewal of old and worn-out ones, which may be taken as an evidence of the desire of property owners to have permanent pavements constructed opposite their property.

TAR MACADAM ROADWAYS.

This class of roadway has come rapidly into favor and is of a better class than the ordinary macadam road. It is so far only in the experimental stage and therefore we are not in a position to speak definitely as to its wearing qualities. It will probably prove

a satisfactory roadway on residential streets over which there is light traffic, and its wearing qualities will be governed by the life-time of the tar and pitch forming the bond. In the construction of these roadways, and some of the ordinary macadam roadways, we have used brick gutters, which are a decided improvement over the old method.

MACADAM ROADWAYS.

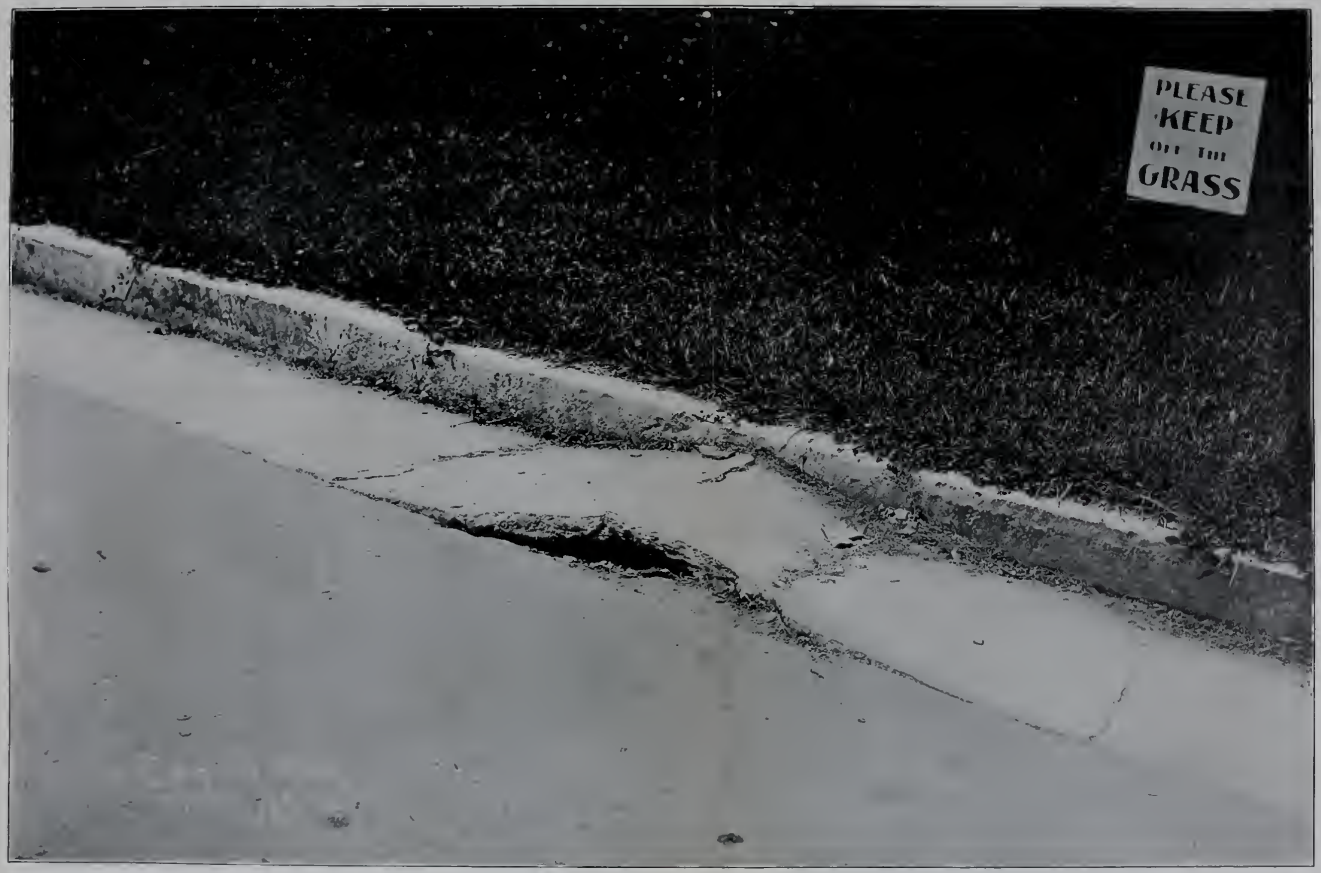
The mileage of macadam roadways is increasing year by year, but I do not favor their construction, as it is very difficult to obtain suitable stone, and it necessarily takes a long time to construct a macadam roadway, which causes considerable annoyance to the people living on the streets where the roadways are being constructed. This class of roadway is dusty in dry, and very dirty in wet weather, and unfortunately we are not granted a sufficient annual appropriation by the City Council to keep our macadam roadways in proper repair.

Regarding the work carried out by day labor, reference may be made to the tables and report prepared by the Assistant Engineer who had charge of this work.

While our streets are rapidly assuming a better condition, there are four or five main thoroughfares which require paving. Among others, College Street from Yonge Street to Beverley Street, which we hope to pave during the coming year; Bloor Street, west of Walmer Road; College Street west of Bathurst Street; Yonge Street north of Davenport Road; Dundas Street and Lakeshore Road. When these streets are paved, all the leading thoroughfares into the City will be in good condition.

CONCRETE SIDEWALKS.

During the year, over 27 miles of concrete sidewalks were constructed and only .049 miles of brick walks were laid. This latter class of walk is being almost entirely discontinued, owing to the low cost and the superior quality of concrete sidewalks. There are now about 83.7 miles of permanent walks in the City, out of a total of about 400 miles of walks of all kinds. Owing to the difficulty experienced in procuring labor and material, I do not think it will be possible to construct more than 35 or 40 miles of concrete sidewalks during the coming year.



DEFECTIVE GUTTER, SPADINA CRESCENT.

A number of the property owners are in favor of constructing sidewalks next the curbing, but it is sometimes very difficult to meet their wishes. Personally, I have never been in favor of this method of construction, except on streets where the private residences abut the street line. Upon streets where macadam roads exist, the mud, during wet weather, is frequently splashed on ladies' dresses. It is also very difficult to make proper entrances into lanes and private thoroughfares, without rendering it very inconvenient for pedestrians. There is also considerable additional expense incurred in moving water works services, poles, etc.

For details in connection with the construction of roadways and sidewalks, reference may be made to the report of the Assistant Engineer, who had charge of this work.

SEWERS AND SPECIAL WORK.

Very few sewers were constructed during the year, only 5,479 lineal feet being laid. This makes a total of 234.53 miles of sewers within the City limits.

The usual repairs to sewers were made, but owing to the appropriation for this work being so small, the inverts of some of the large sewers, which were badly worn, were not repaired. We have had some trouble with 18-inch tile pipe sewers, which were laid without any concrete coverings, and it has been necessary to reconstruct short lengths of them. In all such cases the new pipes have been strengthened by backing concrete around the haunches.

The dredging of the City slips on the Bay front has been carried out by the Department as usual, the total amount expended during the year on this work being $7,020.

For details in connection with this branch of the Department, reference may be made to the report of the Assistant Engineer, who had charge of this work.

BRIDGES, SUBWAYS, ETC.

The draw-bridge over Keating's Channel was not constructed to carry the heavy traffic which now passes over it, and during the coming year we have arranged to convert it into a swing bridge.

The usual repairs were made to the various City bridges.

KING STREET SUBWAY.

Since the construction of the King Street Subway in 1889, a great deal of seepage has occurred through the north wall. This year $2,500 was appropriated for the purpose of draining the walls. An excavation was made back of the walls and under the railway tracks, which was filled in with broken bricks and stone, with a 6-in. tile drain at the bottom, and connected with cast iron pipes through the walls to the sewer. It is expected that this will remedy the trouble.

At the request of the Board of Control, drawings and specifications were prepared for the erection of Butcher Stalls in the St. Lawrence Market.

For details regarding the above, reference may be made to the report of the Assistant Engineer, who had charge of the work, attached to which is a statement showing the number of bridges, style and date of erection.

STREET CLEANING, STREET SWEEPING, SCAVENGING, ETC.

The Street Commissioner has charge of the maintenance of and repairs to all macadam roads, cedar block pavements and wooden sidewalks, also Street Cleaning, Street Watering and Scavenging.

The increased price of labor has largely added to the cost of all works under the control of the Street Commissioner.

In connection with roadways, I wish to direct your attention to the cost of repairs of various macadam roads, the price ranging from 9½ to 29½ cents per square yard.

Regarding the gravel roads, of which there are 5.39 miles within the City limits, these roads were constructed as local improvements, the payments being made in three annual instalments. During this period the City has maintained these roads, but I think the time has arrived when the property owners must have them reconstructed as local improvements, or a more permanent class of pavement laid.

I refer you to a table in the report of the Street Commissioner, showing the cost of Street Cleaning in a number of American cities for the year 1900, which was copied from the Annual Proceedings of the American Society of Municipal Improvements, from which it will be seen that our appropriation for this work, compared with other cities of a similar size, is very small.

During the year the Western Destructor was reconstructed and one of the ovens has been completed and found to work in a satisfactory manner. The second oven will be finished very soon.

The Eastern Destructor is in a very bad condition and its use has been discontinued. A new destructor should be erected on the Marsh.

For details regarding the above, reference may be made to the report of the Street Commissioner, who has gone very carefully into the different works under his control, giving the cost, etc.

FUEL DISTRIBUTION.

On account of the great scarcity of fuel in the City, owing to a strike among the coal miners, the City Council decided to purchase fuel and dispose of it at cost price, plus the cost of handling it, and at a meeting of Council on October 13, 1902, arrangements were made for the purchase of large quantities of both coal and wood.

I cannot give figures regarding the quantity received to the end of the year, but the figures quoted below are the quantities received to the day of writing (Jan. 31, 1903). A complete return will be made in the annual report, 1903.

STATEMENT.

January 31st, 1903.

Wood	Delivered by	Amount.
Hemlock slabs	Simcoe Lumber Co.	370 11-64 cords.
Birch "	" "	174 23-128 "
Hard wood	" "	519 29-32 "
Mixed "	" "	368 21-64 "
Pine slabs	Rathbun Co.	796 63-128 "
Hemlock slabs	Toronto Foundry Co.	55 1-4 "
Hard wood	M. Mansfield	42 "
Hard wood	J. Clancy	29 11-16 "
Hard wood	P. McLeod	29 3-4 "
Pine slabs	Georgian Bay Lumber Co.	40 "

Coal	Delivered by	Amount.	
Hocking Valley (Scotch)	W. Kyle	1014 1-2	Tons.
Hamilton Ell	MacLure Co., Ltd.	2400	"
Welch Admr.	Green, Holland Co.	4268 1235-2000	"
Welch	Samuel, Benjamin Co	60 200-2000	"
Wolverine	Handy Bros.	44 539-2000	"

Respectfully submitted,

C. H. RUST,

City Engineer, and Chief Engineer and Manager of Water Works.

PAVEMENTS, ROADWAYS AND PERMANENT SIDEWALKS.

City Engineer's Department,
Toronto, December 31st, 1902.

C. H. Rust, Esq.,
City Engineer.

Dear Sir,—Herewith I submit the Annual Report, showing in detail the work done under the supervision of the Roadway Branch of the City Engineer's Department.

Nineteen contracts were let in 1901 and carried over to be constructed this year. Two hundred and six contract works let in 1902 were constructed and seventy day labor works were undertaken and the construction of forty-eight private permanent walks were superintended, making in all three hundred and twenty-four works undertaken during the year. This is an increase of ninety-six over the previous year, 1901, which, up to that time, was the largest number of works undertaken in any one year. In addition to these, the boulevards of a number of streets on which permanent walks had been constructed, were graded and sodded.

The work done consists of the construction of 17.413 miles of pavements and 27.409 miles of concrete and brick sidewalks. A reference to Table No. 2 will show that the pavements constructed show an increase of 1.784 miles over the year 1901, and a reference to Table No. 7 will also show a corresponding increase in the number of square yards of pavements constructed, indicating that the improvement of our wider business streets is being maintained.

The increase in the mileage of concrete sidewalks constructed is 10.055 miles, indicating the great popularity of this class of permanent walk in the City.

During the past five years, 103.47 miles of pavements have been constructed, which is 40 per cent. of the total mileage of the streets of the City.

The system of the City Engineer tendering against contractors has been continued this year, and in competition his tender was found to be the lowest on 51 contracts; and 19 contracts, secured by the American firm of contractors, Stamsen & Blome, were afterwards

given to the Engineer to be constructed by day labor and all of these 70 works were carried out as day labor works under the supervision of this Department.

Tables 9 and 10 show the actual cost of these works, also the loss or gain when compared with the lowest contractor's tender.

The following table classifies the various works constructed during the year, showing an increase over 1901 of 96 in the number of works constructed under the direction of this Department:

TABLE No. 1.

Class of Work.	*No. of Works.*
Asphalt	24
Brick on concrete	11
Concrete	1
Cedar blocks on sand	8
Cedar blocks on tarred boards	2
Macadam	24
Tar macadam	6
Construction of new track allowance	1
Reconstruction of track allowance (brick on concrete)	6
Concrete sidewalks	188
Brick sidewalks	1
Private contracts (sidewalks)	48
Wood and stone curbing	4
	324

In connection with pavements and sidewalks, including those proposed but not carried out, 125 plans and 482 estimates were prepared.

TABLE No. 2.

MILEAGE OF DIFFERENT CLASSES OF PAVEMENTS, ROADWAYS AND SIDEWALKS LAID FROM 1890 TO 1902.

Class of Work	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
Pavements and Roadways—	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
Asphalt	1.73	1.635	6.216	5.607	3.067	1.156	0.366	0.460	3.408	6.215	6.348	4.449	5.237
Cedar block on sand and plank foundation	15.51	9.186	3.349	3.249	0.852	1.753	0.428	2.459	4.831	3.151	7.842	2.725	2.191
Macadam (including tar macadam)	.....	0.123	0.494	.....	0.059	1.663	1.661	0.510	2.089	5.013	2.503	2.733	5.486
Cobble	0.10	0.069	0.366	.....	.....	.....	.....	.....	.....	.....	0.068	.....	.....
Tamarac on concrete	0.192	0.077	.....	.....	.....	.....	.....	.....	.....	0.067	.. ..	.....	.....
Cedar block on concrete	.....	.... .	8.416	2.185	0.826	0.227	0.038	.....	0.084	0.079	.....	0.021	.....
Stone setts on concrete	.....	.....	0.705	3.743	2.563	0.085	.....	.....	.....	.....	0.107	0.028	.....
Scoria blocks on concrete	0.138	.....	0.028	.....	.....	0.117	.....	.....	2.986	1.367	1.247	0.669	.....
Brick on concrete	.....	.....	.....	3.964	0.787	0.744	1.032	5.803	6.079	3.670	5.472	2.885	4.272
Brick on gravel	.....	....	.....	....	.....	.....	0.028	0.838	0.352	0.943	0.057	.....	.....
Brick on broken stone	.... .	.....	.....	.....	.....	.....	.....	.....	.....	0.546	0.516	1.627	.....
Concrete pavements in lanes	.....	.....	.....	.....	. .	0.071	.....	.....	0.057	.....	. ....	.....	0.041
Gravel	.....	.....	.....	.....	.....	.....	.....	3.138	4.756	0.069	0.303	0.222	.....
Concrete in track allowance	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.203	0.270	0.186
Totals	17.670	11.090	19.574	18.748	8.154	5.816	3.553	13.208	24.642	21.120	24.666	15.629	17.413
Sidewalks—													
Concrete	1.426	1.930	1.508	2.259	1.137	1.918	0.612	1.050	2.548	5.474	15.227	17.305	27.360
Stone flag	1.273	0.398	0.104	0.035	0.011	.....	.....	.....	.....	.....	.....	.....	.....
Brick	.....	.....	.... .	... ..	.....	.....	0.204	0.823	1.188	0.292	0.038	0.511	0.049
Totals	2.699	2.328	1.612	2.294	1.148	1.918	0.816	1.873	3.736	5.766	15.265	17.816	27.409

Massillon Block, laid in 1898.

QUEEN STREET, WEST OF SUBWAY, BRICK PAVEMENT.
Grade of 4.61 per 100.

Metropolitan Block, laid in 1898.

The first pavements laid under the Local Improvement system were constructed during the year 1881, and the annual variation in the mileage of paved and unpaved streets, with classifications of same, up to the end of the year 1902, is shown in the following Table No. 3:

TABLE No. 3.

SHOWING THE DIFFERENT CLASSES OF PAVEMENTS AND ROADWAYS AND MILEAGE OF SAME FROM 1881 TO 1902.

Year	Cedar Block	Stone and Scoria	Asphalt	Wood on concrete	Macadam	Cedar Block with Paved Track Allowance	Macadam with Paved Track Allowance	Brick	Gravel	Unpaved	Total Mileage
	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles	Miles
1881	3.51	0.03	.....	.....	50.92	.....	.....	.....	.....	62.39	116.85
1882	13.41	0.03	.....	.....	48.28	.....	.....	.....	.....	55.13	116.85
1883	26.90	0.03	.....	.....	54.57	.....	.....	.....	.....	54.07	135.57
1884	33.76	0.25	.....	.....	52.32	.....	.....	.....	.....	76.77	163.10
1885	39.84	0.25	.....	.....	50.17	.....	.....	.....	.....	75.98	166.24
1886	48.99	0.36	.....	.....	47.36	.....	.....	.....	.....	72.18	168.89
1887	64.11	0.36	0.07	.....	45.14	.....	.....	.....	.....	59.21	168.89
1888	79.55	0.36	0.25	.....	42.76	.....	.....	.....	.....	49.87	172.79
1889	92.39	0.36	3.36	.....	38.65	.....	.....	.....	.....	107.43	242.19
1890	109.57	0.36	5.08	.....	36.63	.....	.....	.....	.....	90.55	242.19
1891	116.83	0.59	6.66	0.49	36.39	.....	.....	.....	.....	89.44	250.40
1892	116.86	0.65	10.49	0.49	36.98	2.35	.....	.....	.....	84.89	252.71
1893	112.19	0.79	11.28	0.49	34.98	11.03	0.54	.....	.....	82.05	253.35
1894	111.16	0.81	13.70	0.49	35.95	10.85	0.54	.....	.....	79.98	253.48
1895	109.78	0.81	14.38	0.49	39.15	11.20	0.73	0.38	.....	79.48	256.40
1896	108.79	0.81	14.61	0.53	39.71	11.28	0.70	1.32	.....	79.74	257.40
1897	101.36	0.81	15.07	0.53	40.50	13.70	1.08	3.58	3.22	78.45	258.30
1898	94.90	0.65	18.30	0.61	41.91	11.16	1.26	5.91	4.56	78.67	257.93
1899	81.77	0.65	24.33	0.67	45.03	13.67	0.97	8.77	5.03	78.14	259.03
1900	70.49	0.68	30.81	0.67	46.90	15.29	0.91	10.77	5.34	77.26	259.12
1901	61.48	0.81	34.92	0.67	48.41	16.20	2.82	11.53	5.54	77.22	259.60
1902	48.57	0.81	39.75	0.25	50.88	21.20	3.12	12.51	5.39	77.66	260.14

CHURCH STREET ASPHALT.

CHURCH STREET ASPHALT.

TABLE No. 4.

SHOWING PERCENTAGE OF DIFFERENT CLASSES OF PAVEMENTS AND ROADWAYS.

Cedar block	18.67	per cent.
Stone on scoria	.32	"
Asphalt	15.28	"
Wood on concrete	.10	"
Macadam (including Tar Macadam)	19.56	"
Cedar block with paved track allowance	8.15	"
Macadam with stone setts between tracks	1.19	"
Brick	4.81	"
Gravel	2.07	"
Unpaved	29.85	"
	100.00	"

ASPHALT PAVEMENTS.

During the year, six heavy asphalt pavements and seventeen light asphalt pavements were constructed and one street was re-surfaced with asphalt on the existing concrete foundation. The pavements constructed aggregate 47,125 square yards of heavy asphalt, 33,535.5 square yards of light asphalt and 4,346 square yards of asphalt re-surfacing, and a total length of 5.237 miles, which is 30 per cent. of the total mileage of all classes of pavements and roadways constructed during the year.

The total length of asphalt pavements in the City is now 39.983 miles, or 15.3 per cent. of the total length of paved and unpaved streets in the City.

At the beginning of the year, two firms of contractors were tendering for asphalt work, both using "Trinidad Pitch Lake" asphalt exclusively. Late in June, a new competitor entered the field, tendering to use the "Acme" California asphalt, and who, during the year, secured contracts on seven streets. The advent of this new firm resulted in quite an appreciable decrease in the cost of asphalt work.

The repairing of the asphalt pavements upon which the terms of guarantee have expired was let by tender, the prices for the year being $1.30 and $1.23 per square yard for 2½-inch and 2-inch surface respectively, and $5.50 per cubic yard for concrete foundation. Amount expended in asphalt repairs, $13,322.59.

The quantities, prices, and other details connected with the

asphalt pavements constructed during the year are tabulated in Tables Nos. 7 and 8. The accompanying table gives the details of the asphalt mixtures used in paving during the year, including the sand and stone dust used.

In constructing asphalt pavements during the year 38,289 lineal feet of stone curb and 8,931 lineal feet of concrete curb were placed.

Table No. 5 is a list of the streets paved with asphalt on which the contractors' terms of guarantee have expired.

TABLE No. 5.

SHOWING STREETS PAVED WITH ASPHALT UPON WHICH THE CONTRACTORS' GUARANTEES HAVE EXPIRED.

Street.	From	To	Length Feet.	Date of Expiry of Guarantee.
Bay	King	Front	932	Nov. 20, 1893
Jarvis	Queen	Bloor	6,734	Oct. 1, 1894
St. George	Bloor	Bernard	2,025	Oct. 9, 1894
Wellington	Church	Yonge	900	June 28, 1894
Sherbourne	Queen	Bloor	6,786	June 1, 1895
Simcoe	King	Queen	1,182	Aug. 1, 1895
St. George	Bernard	Dupont	966	June 14, 1895
Ontario	Carlton	Howard	2,824	July 28, 1895
Sherbourne	King	Queen	1,160	July 2, 1895
Bloor	Yonge	Sherbourne	2,661	Nov. 18, 1895
Scott	Front	Colborne	374	Nov. 7, 1895
Wellington	Bay	York	848	July 18, 1896
Gerrard	Jarvis	Sherbourne	934	July 24, 1896
Melinda	Yonge	Bay	587	Aug. 5, 1896
Jordan	Wellington	King	379	Aug. 5, 1896
Sherbourne	The Bridge	South Drive	1,076	Nov. 11, 1896
Bay	King	Queen	1,175	Aug. 15, 1896
St. George	College	Bloor	3,286	Sept. 25, 1896
Toronto	N. line stone pvt.	Adelaide	349	May 1, 1897
Adelaide	York	Spadina	3,001	July 21, 1897
Victoria	King	Adelaide	414	Sept. 1, 1897
Rose	Howard	Winchester	2,134	Sept. 1, 1897
Yonge	King	Hayter	4,000	Nov. 9, 1897
St. James	Ontario	Parliament	595	Sept. 7, 1897
Yonge	Hayter	Grenville	944	Nov. 14, 1897
Devonshire Pl.	Hoskin	Bloor	1,228	Sept. 30, 1897
Yonge	Grenville	Bloor	3,099	Nov. 25, 1897
Richmond	Victoria	Bay	852	June 27, 1898
Earl	Sherbourne	West terminus.	634	July 13, 1898
Winchester	Parliament	Sumach	1,512	Aug. 24, 1898
Mann's Lane	Wellington	218 ft. north	218	Aug. 23, 1898
Czar	Yonge	North	666	Sept. 25, 1898
Lane around Inland Revenue Office			265	Oct. 5, 1898
Linden	Sherbourne	Huntley	585	Oct. 21, 1898
Hoskin	St. George	Queen's Pk. Cr.	1,130	June 27, 1899
Carlton	Jarvis	Sherbourne	937	June 7, 1899
Queen	Yonge	River	6,084	July 14, 1899
Bleecker	Carlton	Wellesley	1,412	July 5, 1899
Wellesley	Sherbourne	Parliament	1,227	Sept. 25, 1899
Cecil	Spadina	Beverley	1,052	Sept. 27, 1899
McCaul (tracks)	Queen	College	3,384	Nov. 5, 1899
Adelaide	Yonge	Church	903	Nov. 8, 1899
King	Simcoe	Sherbourne	4,999	June 15, 1899
Leader Lane	King	Colborne	197	May 25, 1900
Avenue Rd.(trk's)	Bloor	Davenport	2,289	May 21, 1900
Avenue Rd	Bloor	Davenport	2,289	Aug. 29, 1900
St. Patrick	McCaul	Beverley	606	Sept. 9, 1900
Victoria	Adelaide	Queen	694	Sept. 28, 1900

BRICK PAVEMENTS.

This class of pavement has just about held its own as compared with the year 1901, both on street paving and track allowance work. In 1902 the pavements on streets aggregated 0.994 miles, as compared with 0.974 miles in 1901, and track allowance construction and re-construction aggregated 3.278 miles as compared with 3.538 miles. The comparison of square yards of brick pavements constructed shows a total of 45,614 square yards in 1901, and 38,993 square yards in 1902.

All the street pavements were constructed with concrete foundations and stone curbing, the greatly improved condition of pavements so constructed warranting the increased cost as compared with the older pavements constructed with gravel foundations and wood curbing, and no effort has been made to have the Department recommend the cheaper form of brick pavement.

The track allowance construction shows 0.58 miles of new tracks constructed during the year, all of which was paved with brick. This track was laid on our standard concrete construction foundation, and a 6-inch T-rail used, the line of granite setts laid as a stringer on each side of the rail being placed $1\frac{1}{4}$ inches from the rail and held in place by a grouting of pea gravel and cement. In constructing brick pavements during the year 8,995 lineal feet of stone curbing were placed.

Of the six track re-construction works, five were constructed with brick and one with concrete. The quantities, prices and other details of the brick pavements constructed during the year are shown in Tables Nos. 7 and 8.

CEDAR BLOCK PAVEMENTS.

Last year a re-action against this class of pavement was shown by a great decrease in the mileage constructed both in new pavements and in the renewal of the cedar block surface. This year shows a still further decrease, which is a gratifying evidence of the desire of the people for better and more permanent pavements. No new pavements on gravel foundation were constructed. On account of the cheapness of repair old cedar block pavements on eight streets were renewed with a surface of new blocks. Two streets were paved with cedar blocks on tarred boards, with tar and screened gravel filling between the blocks. The length of streets paved with cedar

CARLTON STREET, RECONSTRUCTION OF TRACK.

blocks on tarred boards was .255 miles, and of renewed pavements, 1.936 miles compared with .373 miles and 2.180 miles in 1901. In connection with cedar block paving 15,463 lineal feet of wood curbing were placed. Tables Nos. 7 and 8 show in detail the quantities and cost of the cedar block pavements laid during the year.

Table No. 6 shows the sections of streets on which the final assessment for pavements has been paid or will be paid during the ensuing year. Many of these pavements are beyond repair.

TABLE No. 6.

Street.	From	To	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Abbs	Brock	West terminus	C. B.	1891	1896
Adelaide	York	Spadina	Asphalt	1892	1900
Afton	Lisgar	Northcote	Gravel	1898	1901
Alpine (late Walter).	Davenport	McMurrich	C. B.	1891	1897
Argyle	Dundas	Gladstone.	"	1895	1900
Augusta Av	Nassau	College	"	1886	1896
Augusta Av	Nassau	St. Patrick	"	1889	1898
Avenue Rd.	Davenport.	North City limit.	"	1890	1900
Baldwin	Beverley	Spadina	"	1895	1900
Baldwin	Beverley	McCaul	"	1897	1902
Barton	Manning	Euclid	"	1890	1900
Barton	Palmerston	Euclid	"	1892	1897
Barton (late Lowther).	Brunswick	Howland	"	1892	1898
Bathurst	S. s. of Bridge.	North Rly. Gate	"	1886	1897
Bathurst	College.	Bloor	"	1884	1895
Bathurst	Queen	College	"	1889	1898
Bathurst	Bloor	C. P. R.	"	1890	1900
Bay	King	Queen	Asphalt	1891	1899
Beaconsfield	Queen	Afton	Gravel	1898	1901
Beaconsfield	Afton	Dundas	"	1898	1901
Bedford Rd	Bernard	Davenport.	C. B.	1889	1898
Belmont	Yonge	Davenport Rd.	"	1887	1897
Beverley	Queen	College	Macadam.	1896	1901
Birch	Yonge	West terminus	C. B.	1890	1900
Bishop	Davenport	West terminus	"	1886	1896
Bismarck	Yonge	Park Rd.	Macadam	1891	1897
Bismarck	Park Rd.	East end	C. B.	1891	1897
Bleecker	Wellesley	Howard	"	1893	1898
Bleecker	Carlton	Wellesley	Asphalt	1894	1902
Blevins	Sumach	East end	C. B	1896	1897
Blong (l'te Booth)	Queen	G. T. R.	"	1889	1899
Bloor	Yonge	Avenue Rd.	Macadam.	1889	1895
Bloor	Yonge	Sherbourne	Asphalt.	1890	1900
Bloor	Walmer	Bathurst	C. B.	1889	1900
Bloor	Bathurst	Clinton	"	1889	1901
Bloor	Shaw	Dufferin	"	1890	1901
Bloor	Clinton	Shaw	"	1891	1901
Bloor	Dufferin	Lansdowne	"	1894	1901
Booth	Queen	Eastern	"	1891	1896
Booth	Queen	G. T. R.	"	1889	1899
Bowman (late Maple).	Carlton	Sackville Pl.	"	1889	1899
Broadview	Withrow	Danforth	"	1890	1898
Broadview	Queen	Gerrard	"	1887	1897
Broadview	Gerrard.	Withrow	"	1887	1897
Broadview	Queen	Eastern	"	1891	1896

Street.	From	To	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Brock	Queen	Dundas	Gravel	1898	1901
Brock	Logan	Howland	C. B	1888	1898
Brownsville Av.	St. Joseph	St. Albans	"	1889	1900
Casimir	St. Patrick	North to a lane	"	1889	1898
Callendar	Queen	North terminus	"	1890	1898
Carlaw	Queen	Eastern	"	1889	1899
Carlaw	Eastern	Bay	"	1885	1897
Caroline	Queen	Eastern	"	1889	1899
Carr	Esther	End of Carr	"	1894	1899
Charles	Church	Jarvis	"	1897	1902
Christie	Bloor	Melville	"	1891	1898
Churchill	Term. of Pav't.	136 ft. east	"	1893	1898
Clarence	Wellington	North end	"	1886	1897
Clara	Oak	Orford	"	1886	1896
Classic Pl	Huron	East end	Macadam	1897	1902
Clifford	Stafford	Strachan	C. B	1887	1897
Clinton	473 ft. s. Bloor	891 ft. s. Bloor	"	1891	1897
Collahie	Gladstone	Beaconsfield	Gravel	1899	1902
College	Dufferin	Lansdowne	C. B	1888	1896
College	McCaul	Beverley	"	1883	L'd by City
College	McCaul	Yonge	"	1885	"
College	Ossington	Bathurst	"	1887	1897
College	Ossington	Dufferin	"	1887	1897
Cottingham	Yonge	Avenue Road	"	1886	1896
Cottingham	Rathnelly	Poplar Plains Rd.	"	1889	1899
Crawford	Queen	Defoe	"	1890	1900
Crescent Rd. (late North Dr.)	Rosedale Rd.	Woodland	"	Yorkville	1897
Crocker	Bellwoods	Claremont	"	1890	1900
Czar	Yonge	North	Asphalt	1893	1901
D'Arcy	McCaul	Spadina	C. B	1895	1900
Darling	North terminus	End of sewer	"	1891	1896
Davenport Pl.	Davenport Rd.	End of street	"	1888	1898
Davies	Queen	Matilda	"	1894	1899
Defoe	Tecumseth	Niagara	"	1890	1900
Deleware	College	Bloor	"	1892	1897
Deleware	Bloor	Van Horne	"	1891	1897
Devonshire Pl.	Hoskin	Bloor	Asphalt	1892	1902
Dewson	Ossington	Dovercourt	C. B	1890	1900
Dorset	King	Wellington	"	1883	1894
Dovercourt	Bloor	Van Horne	"	1891	1901
Dovercourt	Queen	Dundas	Gravel	1898	1901
Dowling	G. T. R.	Hawthorne	C. B	Parkdale	1897
Dufferin	Peel	Dundas	Gravel	1898	1901
Dufferin	King	G. T. R. Div.	C. B	1889	1898
Dufferin	Bloor	Union	"	1891	1901
Dunn	Queen	Lake	Gravel	1898	1901
Dunbar	Elm	Hill	C. B	1890	1900
Dundas	Sorauren	Bloor	"	1893	1898

Street.	From	To	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Dupont	Bathurst	Manning	C. B	1892	1897
Dupont	Avenue Rd	Bedford	"	1890	1897
Earl	Sherbourne	West terminus	Asphalt	1893	1898
Earnbridge	Birch	East "	C. B	1888	1899
Eastern Av	Trinity	Water	"	1889	1899
Elm Av	Sherbourne	Huntley	"	1889	1899
Elm Grove	King	Queen	Gravel	1898	1901
Elm	Yonge	University	Macadam	1899	1902
Elmsley Pl	St. Joseph	North terminus	C. B	1890	1900
Emily	Brock	Maude	"	1888	1899
Emily	St. Clarens	Brock	"	1888	1899
Empress Cr. (late Victoria Cr.)	Dowling	Jameson	"	Parkdale	1897
Empress Cr. (late Victoria Cr.)	Dunn	Jameson	"	1893	1898
Euclid	Arthur	College	"	1897	1902
Euclid	Bloor	Johnston	"	1890	1898
Euclid Pl	Euclid Av	East terminus	"	1893	1899
Evans Av	Clinton	West terminus	"	1892	1898
Farley	Tecumseth	Niagara	"	1889	1898
Frankish	Brock	Sheridan	"	1890	1899
Frizzell	Carlaw	Pape	"	1891	1900
Front	Sherbourne	Trinity	Macadam	1899	1902
Front	George	Sherbourne	"	1899	1902
Foxley	Dundas	Dovercourt	Gravel	1898	1901
Gerrard	Broadview	Howland	C. B	1888	1897
Gerrard	Jarvis	Sherbourne	Asphalt	1891	1901
Gildersleeve	Sumach	East end	C. B	1894	1899
Givens	College	Bloor	"	1890	1901
Gladstone	Queen	Dundas	"	1897	1902
Gordon	Sheridan	Dufferin	"	1891	1896
Gordon	Dale	Elm	"	1890	1899
Grace	Arthur	College	"	1891	1902
Grafton	Roncesvalles	East end	"	1891	1899
Grand Opera House Lane.	Adelaide	149 ft. south	Brick	1896	1902
Grant	Kintyre	North terminus	C. B	1890	1900
Hallam (late Brighton).	Pape	East end	"	1890	1899
Halton	Shaw	Dundas	"	1892	1897
Hamburg Av	Bloor	Union	"	1891	1899
Hamilton	Paul	Elliott	"	1890	1899
Hamilton (late Harris).	Queen	Paul	"	1891	1896
Harbord	Huron	Bathurst	"	1897	1902
Harrison	Ossington Av	Lakeview Av	"	1889	1899
Henderson	Clinton	Grace	"	1891	1898
Herrick	Bathurst	Lippincott	"	1892	1897

Street.	From	To	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Heward Av	Queen	Eastern Av.....	C. B.....	1889	1899
High Park Av .	Roncesvalles ..	High Park	"	1893	1899
Howard Park Av	Dundas	Roncesvalles Av.	"	1891	1901
Howie	Clark	North end	"	1889	1899
Huntley (late Bridge).	Bloor....	Elm Av	"	1890	1900
Huron.....	Phoebe	Grange Av . ..	"	1893	1898
Isabella.....	Sherbourne....	Jarvis	Macadam .	1898	1901
Jarvis	King	Queen	"	1896	1899
Jarvis	Queen	Bloor	Asphalt...	1889	1899
John	King	Queen	C. B.....	1890	1900
John	King	Front	Macadam .	1895	1899
Jordan	Wellington....	King	Asphalt...	1891	1899
King	Sherbourne....	Berkeley.....	C. B.....	1883	1894
King	Dufferin	Queen	"	Parkdale	1897
King	Dufferin	3,000 ft. easterly.	Tamarac ..	1891	1899
Lane between St. Patrick and D'Arcy.	Huron..	Beverley.....	C. B.....	1892	1897
Lane s. of Pearl.	near Simcoe ..	....	Cobble ...	1892	1897
Lane e. Spadina.	Grange	St. Patrick	"	1892	1897
Lane bet. Duke and Duchess.	Ontario	West terminus ..	C. B.....	1886	1896
Lane s. of Pearl	Simcoe.....	York	Cobble ..	1892	1897
Lane bet. Yonge and Victoria.	Gould	Wilton	"	1887	1897
Lane bet. Yonge and Victoria.	Adelaide.....	106 ft. south	"	1892	1897
Lane 1st w. of Bay	s. of Wellington	.....	C. B.....	1889	1897
Lane bet. York and Simcoe.	n. of Pearl....	Near Adelaide ..	"	1888	1898
Lane 1st n. of Queen.	Mutual	Jarvis	"	1888	1898
Lane n. of Wilton Cr.	Pembroke	George	"	1888	1898
Lane bet Queen and Richmond	Church	East terminus ...	Cobble....	1888	1898
Lane s. of Queen	Tecumseth ...	Niagara	"	1893	1898
Lane r'r of John	Adelaide.....	Lane n. Arlington Hotel.	C. B.....	1892	1898
Lane e. of Bay..	Wellington ...	214 ft. south	"	1888	1899
Lane 1st e. of Bay	Wellington....	Melinda	Concrete .	1895	1900
Lane n. of Foxley	Foxley	135 ft. north	C. B.....	1889	1899
Lane 1st s. of Queen.	Simcoe	Duncan	"	1889	1899
Lane bet. Borden and Lippincott	Ulster	Bloor	"	1891	1896
Lane in rear of	Standard Bank	.....	Scoria	1892	1902

Street.	From	To	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Lane in rear of	Inland Revenue	Office	Asphalt	1893	1901
Lansdowne	Queen	Union	Gravel	1898	1901
Lansdowne (late Jameson).	Dundas	Bloor	C. B.	1889	1899
Lansdowne (late Jameson).	Dundas	Shirley	"	1888	1898
Lansdowne (late McKenzie).	Bloor	C.P.R	"	1891	1901
Leslie	Queen	Ashbridge's Bay.	"	1891	1901
Linden	Sherbourne	Huntley	Asphalt	1893	1901
Lisgar	Queen	Afton	Gravel	1897	1900
Lisgar	Dundas	Afton	"	1898	1901
Lobb	Shaw	Crawford	C. B.	1890	1900
Logan	Queen	Ashbridge's Bay.	"	1889	1898
Logan	Gerrard	Danforth	"	1889	1899
Lombard	Church	Jarvis	"	1888	1898
Lorne	Front	Esplanade	"	1890	1899
Lowther	St. George	Spadina Rd	"	1890	1900
May (late Bruce)	Shaw	Givens	"	1892	1897
McDonnell	Queen	2,826 ft. north	Gravel	1898	1901
McGee	Queen	Eastern	C. B.	1885	1896
McMaster	Avenue Rd	Rathnelly	"	1890	1900
McPherson	Avenue Rd	Rathnelly	"	1890	1900
McPherson	Rathnelly	Poplar Plains Rd.	"	1890	1901
Manning Av	Robinson	Queen	"	1889	1898
Manning Av.	Bloor	Hammond Pl	"	1890	1900
Mansfield Av	Manning	Clinton	"	1893	1898
Mansfield Av	Bellwoods	Grace	"	1893	1899
Marion	Lansdowne	McDonnell	"	1891	1899
Markham	Harbord	Bloor	"	1889	1898
Massey	King	Queen	"	1891	1897
Maude	Adelaide	Farley	"	1887	1897
Marion (late Lennox).	Roncesvalles	East limit	"	Parkdale	1897
Melbourne	Cowan	Dufferin	Gravel	1897	1900
Melinda	Yonge	Bay	Asphalt	1891	1899
Meredith (late Kensington Cr)	Park Rd	Huntley	C. B.	1891	1896
Millstone Lane	York	East end	"	1889	1899
Mitchell	Tecumseth	Niagara	"	1889	1899
Montague Pl	Homewood Av.	West end	"	1892	1898
Munn's Lane	Wellington	218 ft. north	Asphalt	1893	1901
Napier	Munro	Lane	C. B.	1891	1896
New	Davenport Rd.	West end	"	1889	1899
Niagara	King	Queen	"	1887	1897
Northcote	Queen	Afton	"	1895	1900
Northumberland	Ossington	Preston	"	1893	1898
O'Hara	1,605 ft. north Queen	Railway tracks	"	1892	1897

Street.	From	To	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
O'Hara	Queen	1,455 ft. north	Gravel	1898	1901
Olive	Bathurst	Palmerston	C. B	1893	1898
Ontario Pl	Ontario	270 ft. west	"	1886	1896
Ontario	Carlton	Howard	Asphalt	1890	1900
Osbourne (late Lucas).	Sorauren	Roncesvalles	C. B	1892	1897
Osler (late Edmund).	Royce	C.P.R	"	1892	1898
Ossington	Bloor	C.P.R	"	1892	1897
Ossington	Harrison	College	"	1888	1899
Ottawa	Shaftesbury Av	Summerhill Av	"	1889	1899
Oxford	Augusta	Spadina	"	1895	1900
Palmerston Av	Bloor	Union	"	1890	1899
Pape Av	Queen	Danforth	"	1887	1897
Park Rd. (late Woodland).	North Drive	Park Rd	"	Yorkville	1897
Parkview	Wellesley	North terminus	"	1889	1899
Parliament	Wellesley	Howard	"	1888	1895
Peel	Gladstone	Dufferin	Gravel	1898	1901
Pembroke	Shuter	Wilton	Macadam	1899	1902
Perth Av	Bloor	Royce	C. B	1893	1898
Peter	Front	King	"	1886	1897
Peter	King	Queen	"	1890	1900
Pine Hill Rd	Rosedale Rd	West end	Macadam	1894	1899
Poulett (late Sydenham Lane).	Sydenham	South terminus	C. B	1890	1896
Prospect	Rose	Ontario	"	1889	1899
Queen, raising at	Garrison Creek	Hollow	"	1891	1901
Rathnelly	Rathnelly Cres.	McPherson Av	"	1890	1900
Renfrew Pl	McCaul	East end	"	1889	1899
Richmond Pl.	Richmond	South end	"	1886	1896
Richmond	Victoria	Bay	Asphalt	1893	1901
Richmond	Bay	York	Macadam	1897	1900
Robinson	Palmerston	Euclid	C. B	1886	1896
Roncesvalles	Queen	Dundas	"	1890	1900
Roncesvalles	Pr'st. City limit	Dundas	"	1890	1900
Rose Av	Howard	Winchester	Asphalt	1892	1900
Roseberry Av	Bathurst	End	C. B	1894	1899
Rossin House La	York	East end	Cobble	1891	1897
Rosedale Rd	Park Rd	North Dr	C. B	Yorkville	1897
Rosedale Rd	Roxborough	North Dr	"	1891	1897
Roxborough	Yonge	1,328 ft. west	"	1892	1897
Roxborough	Yonge	2,180 ft. east	"	1891	1900
Royce Av	Symington Av	C.P.R	"	1893	1898
Rush La	Esther	Portland	"	1890	1900
Rusholme Rd	College	Bloor	"	1890	1900
Russell	Robert	Spadina	"	1889	1898
Ruth	Sorauren	Roncesvalles	"	Parkdale	1899

Street.	From	To	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
St. Patrick	Beverley.....	Spadina	C. B	1895	1900
St. Clarens Av .	Emily	Dundas	"	1889	1898
St. Clarens	Dundas	College	"	1890	1900
St. George	Bloor	Bernard	Asphalt ..	1889	1899
St. George	Bernard	Dupont	"	1890	1899
St. George	College	Bloor	"	1891	1901
St. James Av...	Ontario	Parliament.....	"	1892	1899
Salisbury Av...	Sackville	East terminus ...	C. B.....	1886	1897
Salisbury Av...	Sackville	190 ft. west	"	1890	1899
Saulter	Queen	Eastern	"	1889	1899
Saunders	Sorauren.....	Fuller	"	1888	1898
Scott	Front	Colborne.....	Asphalt ..	1890	1900
Shannon	Ossington	Dovercourt.....	C. B.....	1887	1897
Shaw	College	Bloor	"	1893	1898
Shaw	Queen	Defoe	"	1891	1901
Shaftesbury Av.	Yonge	1,100 ft. easterly.	"	1890	1899
Seaforth (late Brown).	Brock	West terminus...	"	1891	1896
Sheppard	Adelaide	Richmond	Macadam .	1895	1899
Sherbourne	Bridge.....	South Dr	Asphalt ..	1891	1901
Sherbourne	King	Queen	"	1890	1899
Sherbourne	Queen	Bloor	"	1889	1899
Shirley	Brock	Lansdowne.....	C. B.....	1891	1898
Simcoe	Front	Station	"	1896	1901
Simcoe	Queen	CaerHowell	"	1889	1899
Simcoe	King	Queen	Asphalt ..	1890	1900
Sorauren Av....	Wright	Dundas	C. B.....	1890	1899
South Dr	Crescent Rd..	Centre Rd	Macadam .	1893	1898
Spadina Av	College	Crescent	C. B.....	1890	1898
Spadina Rd . ..	Bernard	C.P.R..... ...	"	1891	1901
Stafford.... ...	King	Defoe	"	1886	1896
Stafford	Defoe	Clifford	"	1887	1897
Stafford.....	King	Wellington.....	"	1890	1900
Sullivan	Beverley.....	Spadina	"	1895	1900
Sumach.....	King	Eastern	"	1890	1899
Temperance	Yonge	Bay	Macadam .	1896	1899
Thompson.....	Davies.....	Munro.....	C. B	1890	1900
Tiverton (late East).	First Av... ..	South Av	"	1891	1901
Toronto	North of King.	Adelaide.....	Asphalt ..	1892	1897
Triller	Queen	Harvard	C. B.....	1889	1899
Turner	Tecumseth	West end	"	1886	1896
Ulster	Bathurst	Markham	"	1894	1899
Vanauley	Queen	Grange	"	1886	1897
Vanauley	St. Patrick....	St. Andrews ...	"	1887	1897
Victoria La	Queen	Shuter.....	Cobble....	1890	1899
Virtue	Sorauren	East terminus ...	C. B.....	1890	1900
Victoria	King	Adelaide.....	Asphalt ..	1892	1900
Vermont	Bathurst.....	Manning.....	C. B.....	1891	1896

Street.	From	To	Class of Pavement.	Date When Laid.	Date Final Assessm't Paid.
Walmer Rd	Bloor	Lowther	C. B.....	1897	1902
Walker	Yonge	West limit	"	1888	1899
Wascana	Sumach	186 ft. east.....	"	1891	1896
Wellesley Cr ...	Sherbourne ..	Jarvis	Macadam .	1898	1901
Wellesley	Sumach	300 ft. east.....	C. B.....	1889	1899
Wellington Av. (late Douro).	Bathurst.....	East terminus ...	"	1891	1901
Wellington	Church	Yonge	Asphalt ..	1889	1899
Wellington	Bay	York	"	1891	1899
Westmoreland..	Durham	Union	C. B	1890	1900
Westmoreland..	Bloor	Durham	"	1890	1900
Wilkins.....	King	North terminus..	"	1888	1899
Wilson	Queen	King	"	Parkdale	1897
Winchester	Parliament....	Sumach	Asphalt ..	1893	1901
Withrow	Broadview	1,060 ft. east.. .	C. B.....	1889	1898
Woodlawn	Yonge	West end	"	1891	1901
Woolfrey	Broadview	Bowden	"	1888	1899
Wright	McDonnell....	Sorauren.....	"	1891	1899
Wyatt	Sumach	River	"	1889	1898
Wyndham (late Maude).	Emily	Brock	"	1889	1899
Yonge	Davenport Rd.	Railway crossing.	"	1885	1897
Yonge	Grenville	Bloor	Asphalt ..	1892	1902
Yonge	King	Hayter	"	1892	1902
Yonge	Hayter	Grenville	"	1892	1902
Yorkville	Yonge.....	Avenue Rd.....	C. B.....	1896	1901

TAR MACADAM ROADWAYS.

This class of roadway is growing in popular favor to such an extent that I have decided to give it special notice. While in Toronto we are really yet in the experimental stage, so far as the actual permanent qualities of this pavement are concerned, still the results obtained in other cities and the care used in constructing our own streets make us confident that it is a good class of pavement for residential streets with light traffic. It has shown itself to be much less dusty than ordinary macadam and drains much more readily after a rain storm, owing to the smooth water-tight surface, and for that reason is a good pavement from a sanitary point of view. Time only will show its actual wearing qualities, which is governed entirely by the "life" of the tar and paving pitch forming the elastic bond of the crushed stone wearing surface.

A new method of construction was also tried in putting in brick gutters on two tar macadam, and one ordinary macadam roadway, where the grades were fairly steep, to prevent the water washing away the bonding qualities of the pavement in the gutters. This seems to have been entirely successful, and is, I think, an improvement.

One pavement of this kind was constructed in 1900 and one in 1901, while during 1902 six have been constructed and two contracts let were not completed and have been carried over to 1903 to complete.

The length of tar macadam roadways constructed during the year totals .867 miles, compared with .054 miles in 1901. In constructing tar macadam roadways, 8,410 lineal feet of stone curb and 1,305 lineal feet of wood curb were placed. Tables Nos. 7 and 8 show details of the tar macadam pavements.

MACADAM (BROKEN STONE) ROADWAYS.

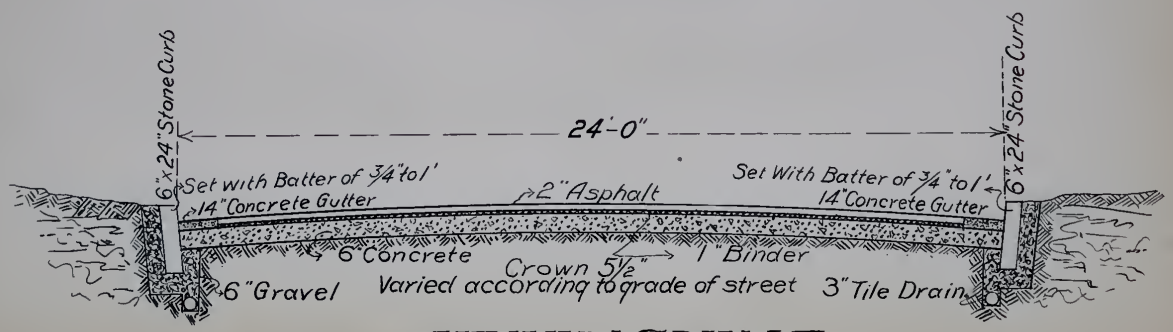
In 1901 it was noticed that this class of pavement was gaining in favor for residential streets, especially in the outer sections of the City and in Rosedale. The increase in mileage has been continued during the past year, the totals being 2.5 miles in 1900, 2.679 miles in 1901, and 4.619 in 1902, showing a very decided increase for the past year. This can only be accounted for because of the cheapness of this class of roadway, as it is dusty, and without constant attention soon becomes uneven and rough. In constructing macadam roadways, 18,156 lineal feet of stone curb and 27,483 lineal feet of wood curb were placed. Tables Nos. 7 and 8 show details of the macadam roadways.

CONCRETE PAVEMENTS.

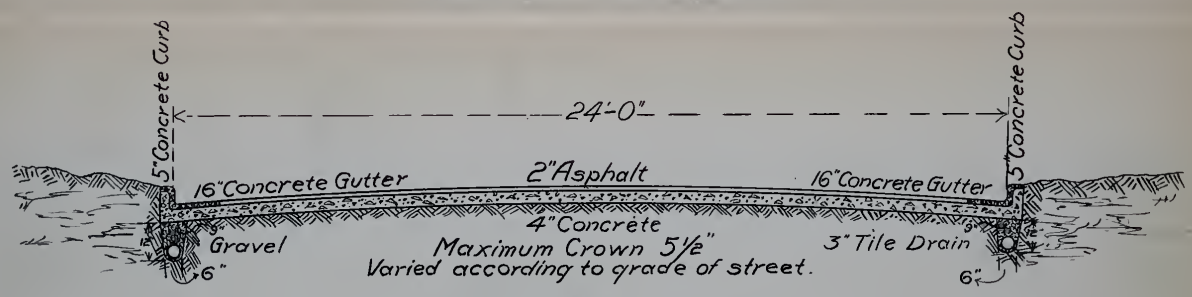
Early in the year the laneway south of King Street, running west from Church Street, was paved with concrete, and it seems to be a perfectly satisfactory pavement for this purpose, as it is easily cleaned and therefore good from a sanitary point of view. I believe short streets and laneways could have no better class of pavement, as it is cheap, considering its quality.

The Street Railway track allowance on Winchester Street was paved with concrete, the similar work on Bloor Street East, con-

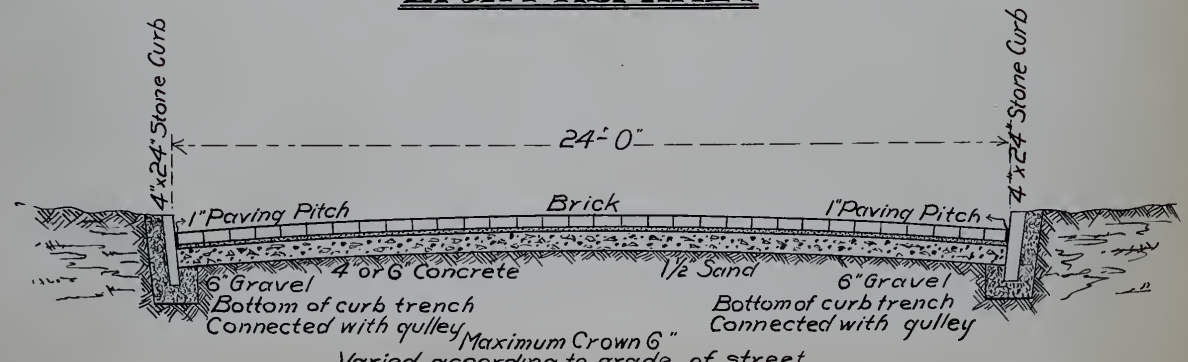
STANDARD CROSS SECTIONS
PAVEMENTS AND SIDEWALKS
City Engineer's Office — Toronto, Ont.
Scale of Pavements; 1" = 1/4"



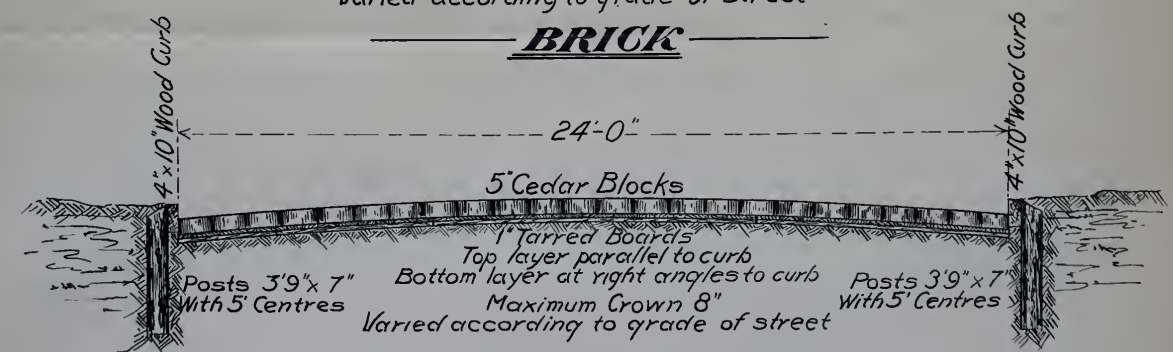
HEAVY ASPHALT



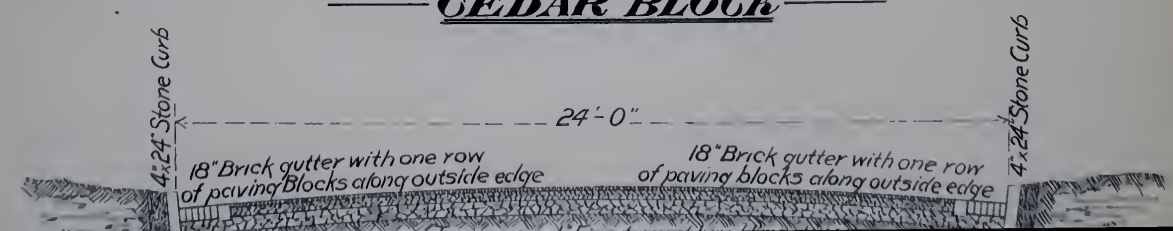
LIGHT ASPHALT



BRICK



CEDAR BLOCK

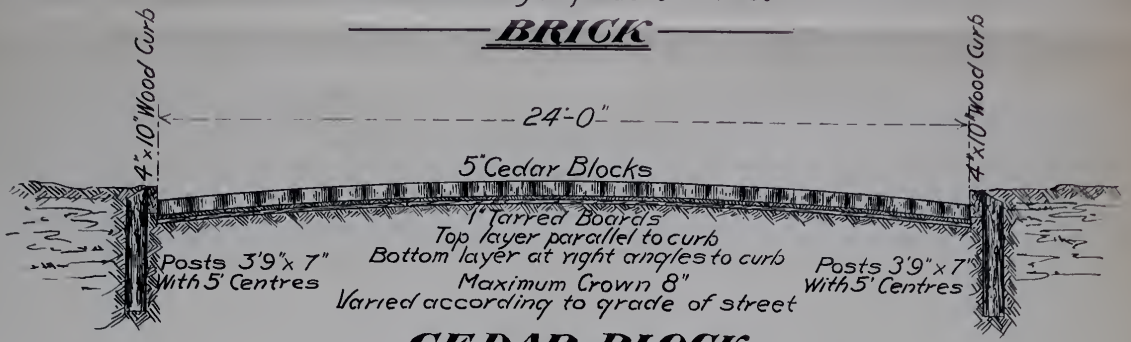

4"x24" Stone Curb
24'-0"
4"x24" Stone Curb
18" Brick gutter with one row
of paving Blocks along outside edge
18" Brick gutter with one row
of paving blocks along outside edge

Bottom of curb trench
Connected with gulley

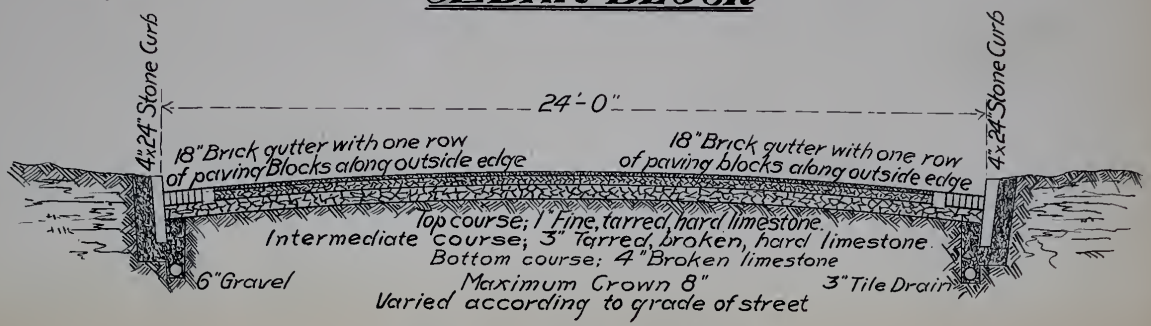
Bottom of curb trench
Connected with gulley

Maximum Crown 6"
Varied according to grade of street

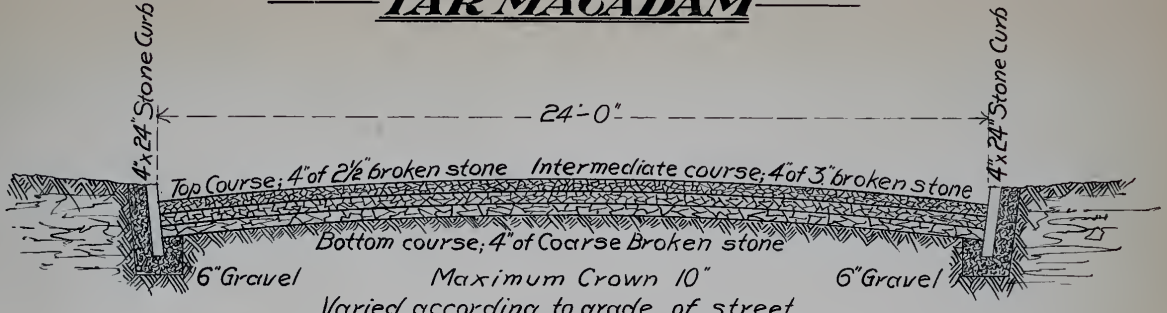
BRICK



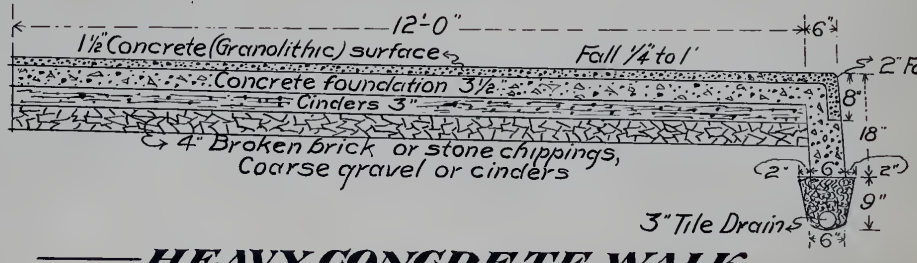
CEDAR BLOCK


4"x24" Stone Curb
24'-0"
4"x24" Stone Curb
18" Brick gutter with one row
of paving Blocks along outside edge
18" Brick gutter with one row
of paving blocks along outside edge
Top course; 1" Fine, tarred, hard limestone.
Intermediate course; 3" Tarred, broken, hard limestone
Bottom course; 4" Broken limestone
6" Gravel
Maximum Crown 8"
Varied according to grade of street
3" Tile Drain

TAR MACADAM

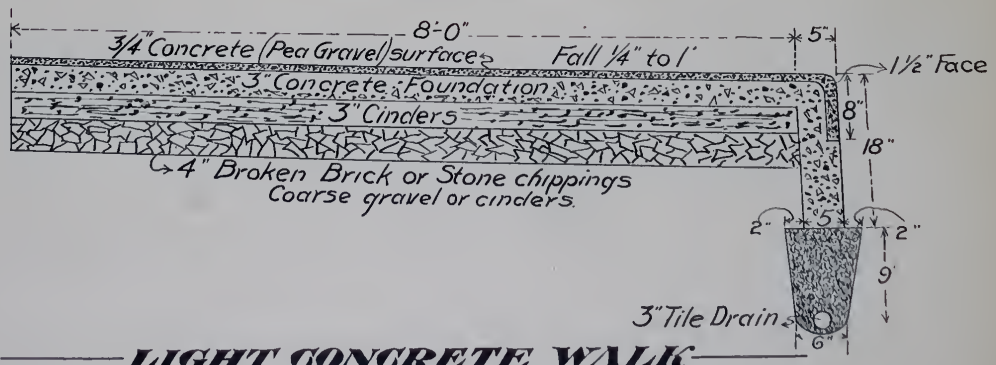

4"x24" Stone Curb
24'-0"
4"x24" Stone Curb
Top Course; 4" of 2½" broken stone
Intermediate course; 4" of 3" broken stone
Bottom course; 4" of Coarse Broken stone
6" Gravel
Maximum Crown 10"
Varied according to grade of street
6" Gravel

MACADAM



HEAVY CONCRETE WALK

Scale; 1" = ½"



LIGHT CONCRETE WALK

Scale; 1' ¾"

Chas W Dell
Roadmays Engineer
Jany 20 '03

structed last year, showing that it makes a desirable pavement where the traffic is not too heavy.

CEMENT CONCRETE AND BRICK SIDEWALKS.

In the year 1900, the mileage of concrete walks constructed was treble that of any preceding year; the year 1901 showed an increase of two miles over 1900, while 1902 has greatly surpassed all previous years, showing an increase of ten miles over 1901, the total mileage of concrete walks being 27.360 and of brick walks .049. In constructing concrete walks, 913 lineal feet of stone curb were placed and 41,190 lineal feet of concrete curb constructed.

The brick walks have practically dropped out, owing to the low cost of the superior, smoother concrete walks. The total length of cement concrete and brick sidewalks in the City is now 83.702 miles.

DAY LABOR WORKS.

During the year, 47 cement concrete sidewalks were constructed by day labor, for 18 of which the City Engineer's tenders were accepted. Ten were done by order of Council without tenders being asked for, and the remaining 19 were contracts previously awarded to Stamsen & Blome, the American firm of contractors who tendered on sidewalks early in the year, and which contracts were afterwards given to the City Engineer to be constructed by day labor. The walks constructed by day labor aggregate 4.373 miles, which is entirely a new record for day labor work.

In comparing the cost of these works, we have taken the lowest local contractor's tender as a basis for comparison on those walks for which tenders were called, as the tenders of Stamsen & Blome were thrown out by the Council. On only four do we show a slight loss, aggregating $43.33, while on the remaining thirty-three walks compared, we show a gain of $3,355.42, or a net saving of $3,312.09 on walks constructed by day labor.

Table No. 9 gives the lengths, widths, amounts of City's tender, the next lowest tender, the actual cost of the work, and the loss or gain in comparison with contractors' tenders. The real saving is not apparent, as the actual saving is that shown plus the Inspector's time always incurred on contract works.

TABLE No 7.

Asphalt Pavements.

Street.	From.	To.	Width.	Length.
			feet.	lin. ft.
Alexander	Church	McMillan	24	335.6
Albany	Bloor	Wells	22	1,827.8
Bay	King	Front	42	932
Baldwin	Spadina	Augusta	18	794.6
Cottingham	Avenue Rd	Rathnally	21	632
Church	Queen	Bloor	26	6,669
Elm Av	Sherbourne	Glen Rd	21	798.3
Huron	Cecil	Baldwin	24	390
Harvard	Callendar	Roncesvalles	21	1,009.6
Louisa	Yonge	Teraulay	30⅓	726.5
Maynard	King	Leopold	20	526.6
Markham	759 ft. s. College	Arthur	24	743
Morris	Huron	Spadina	24	465
Marlborough	Yonge	1,338 ft. west	14 to 18	1,338
Phœbe	Spadina	Soho	24	798.3
Park Rd	Crescent Rd	South Drive	21	786
Spadina	Queen	College	36	3,381
Spadina (w.s.)	Baldwin	College	19ft. 6in.	1,015
Spadina (e.s.)	Baldwin	College	25	1,104
Soho	Queen	Phœbe	24	389.5
Sackville	Carlton	Winchester	24	467
Spencer	Huxley	189 ft. south	20	255
Walmer Rd	Castle	Dupont	24	1,850.4
Widmer	Adelaide	Richmond	18	419

Macadam Roadways.

Crescent Rd	Scarth	Cluny	21	1,647.9
DeGrassie	Queen	Gerrard	21	2,369
Davenport Rd	Hazelton	Avenue Rd	24	484
Elm Av	Glen Rd	Nanton Crest	24	747
Elmsley Pl.	St. Joseph	323 ft. north	24	323.4
Glen Rd.	Bridge	Maple	24	509.7
Lansdowne	Bloor	Royce	26	3,227
Lansdowne	Royce	North City limits	24	248
Logan	Queen	Gerrard	24	2,367
Mutual	Wilton	Gould	24	641.2
Munro	Queen	Gerrard	20	2,441.5
Noble	Brock	298 feet east	24	298
O'Hara	653½ ft. n. of Marion	153 ft. further north	24	150
River	Queen	Gerrard	24	2,338
South Drive	Park Rd	Huntley	24	218

TABLE No. 7.

Asphalt Pavements.

Pavements	Curb. Width.	Curb. Class.	Curb. Length.	Completed.	Contractor.
sq. yds.			lin. ft.		
1,012	5-in. concr.	Concrete	827	July 2, 1902	Barber Asphalt Co.
4,647	4-in. "	Stone ..	3,829	May 31, 1902	" " "
4,346	6-in. "	" ..	26	July 24, 1902	Constructing & Paving Co.
1,664½	5-in. "	Concrete	1,595	July 8, 1902	" " " "
1,500	4-in. "	Stone ..	1,346	May 13, 1902	" " " "
20,517	4-in. "	" ..	12,757	Nov. 18, 1902	Barber Asphalt Co.
2,128	4-in. "	" ..	1,662	June 9, 1902	Constructing & Paving Co.
1,174	4-in. "	" ..	953	Aug. 11, 1902	" " " "
2,410	4-in. "	" ..	2,096	May 13, 1902	" " " "
2,641	4-in. "	" ..	834	Sept. 19, 1902	" " " "
1,152	5-in. "	Concrete	1,035	June 26, 1902	" " " "
2,026	4-in. "	Stone ..	1,595	May 15, 1902	Barber Asphalt Co.
1,416	5-in. "	Concrete	1,090	July 15, 1902	" " "
2,663½	5-in. "	" ..	2,676	Dec. 2, 1902	Constructing & Paving Co.
2,577	5-in. "	" ..	1,715	" 4, 1902	Forest City Paving Co.
2,064	4-in. "	Stone ..	1,769	June 12, 1902	Barber Asphalt Co.
16,464	4-in. "	" ..	5,256	Nov. 8, 1902	Forest City Paving Co.
2,246	None	.....	.....	" 6, 1902	" "
3,129	6-in. concr.	Stone ..	350	" 8, 1902	" "
1,137½	5-in. "	Concrete	66	Aug. 12, 1902	Constructing & Paving Co.
1,341	5-in. "	" ..	1,017	June 28, 1902	Barber Asphalt Co.
743	5-in. "	Stone ..	166	July 2, 1902	Constructing & Paving Co.
5,132	4-in. "	" ..	3,704	Dec. 6, 1902	" "
876	4-in. "	" ..	856	" 9, 1902	" "
85,006.5			47,220		

Macadam Roadways.

4,245	4-in. concr.	Stone ..	3,309	Aug. 30, 1902	City of Toronto.
5,635	4-in. "	Wood ..	4,849	June 7, 1902	Dom. Pvg. & Contrg. Co.
1,345	4-in. "	Stone ..	961	May 31, 1902	Constructing & Paving Co.
2,110	4-in. "	Wood ..	1,472	Not compl'td	Dom. Pvg. & Contrg. Co.
900	4-in. "	" ..	122	" "	City of Toronto.
1,398	4-in. "	Stone ..	1,071	July 3, 1902	" "
9,608	4-in. "	" ..	6,585	Not compl'td	W. F. Grant & Co.
604	4-in. "	" ..	514	" "	" "
6,951	4-in. "	" ..	4,735	Oct. 21, 1902	City of Toronto.
1,785	4-in. "	Wood ..	1,315	Aug. 2, 1902	A. J. Brown.
5,808	4-in. "	" ..	5,015	Nov. 25, 1902	Dom. Pvg. & Contrg. Co.
795	4-in. "	" ..	596	Dec. 1, 1902	City of Toronto.
400	4-in. "	" ..	324	June 18, 1902	J. Maguire.
6,793	4-in. "	" ..	5,036	May 29, 1902	Constructing & Paving Co.
698	4-in. "	Stone ..	411	Sept. 23, 1902	A. J. Brown.

MACADAM ROADWAYS—*Continued.*

Street.	From.	To.	Width.	Length.
			feet.	lin. ft.
Smith	Broadview	Logan	24	1,749
Wellesley Av	Wellesley	249 ft. north	16	249
York	Front	318 ft. south	40	318
Breadalbane	Yonge	St. Vincent	27	640.5
Caer Howell	Simcoe	McCaul	24	546.7
Hayden	Yonge	Church	18	935
Caer Howell	Simcoe	University	30	257.8
Grange	Huron	Beverley	24	572
Walton	Yonge	Elizabeth	20	1,109.5

TAR MACADAM.

Allen	Broadview	Bolton	18	820.7
Dale	Glen Rd	MacKenzie	21	1,092.
Draper	Front	Wellington	18	474.8
Howland Rd	Gerrard	Langley	24	735.5
McPherson	Avenue Rd	629 ft. 7 in. East	24	629.6
McKenzie	Dale	Castle Frank	21	823.4

CEDAR BLOCK ON TARRED BOARDS.

Concord	Dewson	180 s. of Hepbourne	24	878
Givens	Argyle	Halton	24	466.2

CEDAR BLOCK ON GRAVEL.

Bulwer	Soho	Spadina	16	700.5
College	Bathurst	Lansdowne	28	3,708
Dean	Wilton	204 ft. north	24	212
Delaney Cr.	Brock	Wyndham	20	843.5
Middleton	Brock	Sheridan	20	432
St. Clarens	College	Bloor	21	2,690.8
Wyndham	Brock	St. Clarens	20	604.5
Wardell	DeGrassi	South Ave	20	1,031.0

MACADAM ROADWAYS—*Continued.*

Pavements	Curb.			Completed.	Contractor.
	Width.	Class.	Length.		
Sq. yds.			lin. ft.		
4,667	4-in. "	Wood ..	3,550	June 28, 1902	Dom. Pvg. & Contrg. Co.
443	4-in. "	" ..	16	Sept. 26, 1902	City of Toronto.
1,384	4-in. "	Stone ..	503	Aug. 19, 1902	Dom. Pvg. & Contrg. Co.
1,922	None	.....	.....	Apr. 11, 1902	City of Toronto.
1,510	4-in. "	Stone ..	61	May 2, 1902	" "
1,882	4-in. "	Wood ..	1,888	June 19, 1902	J. H. McKnight.
900	4-in. "	" ..	507	Oct. 7, 1902	City of Toronto.
1,525	4-in. "	" ..	596	Sept. 12, 1902	" "
2,583	4-in. "	" ..	2,203	June 10, 1902	" "
65,891			45,639		

TAR MACADAM.

1,641	4-in. concr.	Stone ..	1,677	June 11, 1902	Constructing & Paving Co.
2,718	4-in. "	" .	2,458	Sept. 30, 1902	" " " "
962	4-in. "	" ..	1,029	June 13, 1902	" " " "
2,152½	4-in. "	" ..	1,545	Nov. 5, 1902	" " " "
2,411	4-in. "	Wood ..	1,305	June 24, 1902	Dom. Pav. & Contract. Co.
1,920	4-in. "	Stone ..	1,701	Oct. 11, 1902	Constructing & Paving Co.
11,804½			9,715		

CEDAR BLOCKS ON TARRED BOARDS.

2,453	4-in. concr.	Wood ..	120	Aug. 14, 1902	Dom. Pav. & Contrg. Co.
1,339	4-in. "	" ..	1,002	Sept. 4, 1902	Constructing & Paving Co.
3,792			1,122		

CEDAR BLOCK ON GRAVEL.

1,246	4-in. concr.	Wood .	1,414	April 21, 1902	W. F. Grant & Co.
13,256	4-in. "	" ..	6,400	Not complt'd	Dom. Pav. & Contrg. Co.
565	4-in. "	" ..	472	Oct. 23, 1902	W. F. Grant & Co.
1,899	4-in. "	" .	1,724	Sept. 20, 1902	Constructing and Pav. Co.
960	4-in. "	" .	907	Oct. 18, 1902	W. F. Grant & Co.
6,308	4-in. "	" ..	53	Nov. 15, 1902	" "
1,412	4-in. "	" ..	1,265	June 17, 1902	Constructing & Paving Co.
2,330	4-in. "	" ..	2,106	Oct. 11, 1902	" " " "
27,976			14,341		

Brick on Concrete.

Street.	From.	To.	Width.	Length.
Carlton	Sumach	399½	24	399.5
Cross	Beaconsfield	Gladstone	24	369
Duncan	King	Adelaide	30	440
Dovercourt	Queen	Armour	24	800
Grant	Queen	Kintyre	18	625
Orde	McCaul	Murray	21	456
Pearl	York	633 east	24	633
Waterloo	Gladstone	Dufferin	24	345.5
York	King	Pearl	29	225
York	Queen	Adelaide	29	699
York	Pearl	Adelaide	29	255

Concrete Pavement.

Lane 1st s. of King	Church	218 feet west	15 to 22	218

Construction of Track Allowances.

Street.	From.	To.	Length.	Width.
Dupont	Avenue Road	Walmer Road	3063	16' 8"

Reconstruction of Track Allowances.

Avenue Road	Davenport	C.P.R.	1185	14
Dundas	Bridge	Bloor	3021	14
Howard Park Avenue	Dundas	High Park	3131	14
Queen	Greenwoods	Woodbine Avenue	5374	10
Carlton	Yonge	Parliament	1535.1	14
Winchester	Parliament	Sumach	983.3	14

Brick on Concrete.

Pavements	Curb.			Completed.	Contractor.
	Width.	Class.	Length.		
Sq. yds.			lin. ft.		
1,065	4-in. concr.	Stone ..	847	May 15, 1902	John McBean .....
1,073	4-in. "	" ..	900	Oct. 7, 1902	Dom. Pvg. & Contrg. Co.
1,591	4-in. "	" ..	960	Dec. 12, 1902	Toronto Con. & Pvg. Co.
2,303	4-in. "	" ..	1,780	June 10, 1902	John McBean.
1,333	4-in. "	" ..	1,314	Oct. 4, 1902	A. Chamberlain Co.
1,133	4-in. "	" ..	966	July 10, 1902	City of Toronto.
1,646	4-in. "	" ..	1,338	July 12, 1902	J. Maguire.
964	4-in. "	" ..	819	April 23, 1902	City of Toronto.
804	None.	.....	.....	June 24, 1902	" "
2,358	"	.....	.....	Nov. 28, 1902	Toronto Con. & Pvg. Co.
945	"	Stone ..	71	July 28, 1902	W. F. Grant & Co.
15,215			8,995		

Concrete Pavement.

407.5	None	.....	.....	June 16, 1902	The Harv'd & L'eh Pvg. Co

Construction of Track Allowances.

Sq. yds.	Class of Pavement.	Completed.	Contractors.
5,209	Brick on concrete.....	Dec. 2, 1902 ..	City of Toronto.

Reconstruction of Track Allowances.

1,450	Brick on concrete	July 26, 1902..	City of Toronto.
4,363	" "	June 21, 1902.	" "
4,523	" "	July 12, 1902..	" "
5,845	" "	Nov. 18, 1902 .	John McBean.
2,388	Brick	Nov. 10, 1902 .	City of Toronto.
1,530	Concrete..... . ..	Aug. 23, 1902 .	" "

CONCRETE SIDEWALKS.

Street.	From.	To.	Side.	Width. ft.	in.
Agnes	Chestnut	Centre	South	5	
Albany Av.	Bloor	Wells	West	5	
Booth Av.	Queen	Natalie	"	5	
Brock Av.	Dundas	College	East	5	
Boulton Av.	Queen	Gerrard	"	4	5
Beatrice	College	422 ft. north	Both	4	
Bellwoods	Mansfield	Treford Pl	East	5	
Bloor	Yonge	Queen's Park Crs't.	South	6	
Bulwer	Soho	Spadina	"	4	
Bank	Dufferin	Sheridan	North	4	
Bernard	Spadina	Madison	South	5	
Bloor	97 ft. w. of Yonge	Avenue Rd.	North	6	
Bleecker	Carlton	Wellesley	West	5	
Berkeley	Carlton	529 ft. south	East	5	
Bellair	Cumberland	Yorkville	West	3	5
Balmuto	Czar	Bloor	"	5	
Beverley	D'Arcy	132 ft. 9 in. south of Baldwin	East	6	
Bellevue	Bellevue Pl.	Oxford	"	5	
Brooke	Howland	Logan	North	5	
Bedford	Bernard	Davenport	East	5	
Bedford	Bloor	Lowther	"	5	
Beverley	Queen	Grange	"	6	
Bernard	Bedford	141 ft. west	South	5	
Bedford	Lowther	Bernard	West	5	
Balmuto	Czar	Bloor	East	5	
Booth	Queen	Jemima	"	5	
Boulton	Queen	Gerrard	West	5	
Carlton	Sackville	Gifford	South	6	
Cowan	King	Huxley	Both	6	
Carlton	Sumach	399½ ft. east	South	5	
Crawford	126 ft. n. of Queen	680 ft. north	East	5	
Czar	Yonge	Balmuto	North	5	
Crescent Rd.	Opposite No. 166	No. 162	"	5	
Crawford	Queen	109⅓ ft. north	East	5	
Coolmine Rd	Dundas	St. Anne	West	5	
Carlaw	Eastern	1,057 ft. south	"	5	
Carlaw	Eastern	Queen	"	5	
Crescent Rd.	Scarth	Cluny Av.	North	5	
Church	Wellesley	Bloor	West	6	
Court	Church	107 ft. west	North	8	
Crescent Road	from No. 185	No. 151	South	5	
Church	Shuter	52 ft. 7 in. south of Carlton	East	6	
Church	167 ft. n. of Carlton	Alexander	"	6	
Clinton	Harbord	385⅓ ft. north	"	5	
Clarence Sq	Spadina	Wellington	N. and E	5	

CONCRETE SIDEWALKS.

Length.		Curb.		Completed.	Contractor.
		Class.	Length.		
lm. ft.	in.				
247		5-in. ...	Concrete	Oct. 4, 1902	City of Toronto.
1,772	3	None	.....	Dec. 1, 1902	Harvard and Leach.
411	8	5-in.....	Concrete	Sept. 23, 1902	Toronto Con. & Pav. Co.
609		None	.....	" 24, 1902	W. R. Payne.
2,379	9	5-in.....	Concrete	Nov. 24, 1902	" "
843		None	.....	" 19, 1902	City of Toronto.
274	7	None	.....	" 14, 1902	Toronto Con. & Pav. Co.
1,911		None	.....	Oct. 25, 1902	Harvard & Leach.
670	9	None	.....	Sept. 27, 1902	A. Gardner & Co.
470	7	5-in.....	Concrete	" 18, 1902	W. R. Payne.
262		5-in.....	"	" 8, 1902	City of Toronto.
1,838	8	None	.....	Aug. 23, 1902	Crescent Concrete Co.
1,430		None	.....	" 12, 1902	City of Toronto.
515	6	None	.....	" 6, 1902	A Gardner & Co.
263	7	5-in.....	Concrete	July 31, 1902	A. Chamberlain & Co.
542		None	.....	" 31, 1902	City of Toronto.
187	5	None	.....	" 21, 1902	A. Gardner & Co.
983		5-in.....	Concrete	" 10, 1902	Harvard & Leach.
467	5	5-in.....	"	" 7, 1902	" "
349	6	.....	.....	May 6, 1902	R. A. Rogers & Co.
759		None	.....	" 10, 1902	W. R. Payne.
767	2	None	.....	" 14, 1902	City of Toronto.
158		None	.....	Apr. 17, 1902	" "
1,130	3	None	.....	" 16, 1902	W. R. Payne.
535	2	None	.....	" 22, 1902	City of Toronto.
1,060	7	5-in.....	Concrete	June 3, 1902	W. F. Grant & Co.
2,303	1	None	.....	" 26, 1902	City of Toronto.
212	7	5-in.....	Concrete	" 10, 1902	A. Chamberlain & Co.
2,968	6	None	.....	July 7, 1902	A. Gardner & Co.
400		None	.....	June 3, 1902	A. Chamberlain & Co.
677	8	None	.....	May 10, 1902	City of Toronto.
296	4	None	.....	April 19, 1902	" "
192	7	None	.....	" 23, 1902	" "
95	7	None	.....	May 8, 1902	" "
699		None	.....	July 7, 1902	W. R. Payne.
1,078		5-in.....	Concrete	" 30, 1902	City of Toronto.
953	2	5-in.	"	Sept. 19, 1902	A. Chamberlain & Co.
1,196		None	.....	Dec. 5, 1902	A. Gardner & Co.
1,882	5	None	.....	Sept. 30, 1902	" "
107	3	6-in.....	Concrete	Oct. 6, 1902	City of Toronto.
393	3	None	.....	Nov. 24, 1902	A. Gardner & Co.
2,350	6	None	.....	" 24, 1902	Crescent Concrete Co.
456	8	None	.....	" 14, 1902	A. Gardner & Co.
402	4	None	.....	" 18, 1902	Toronto Con. & Pav. Co.
451	9	None	.....	" 29, 1902	" " "

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width.
				ft. in.
Dunn Ave	King	G.T.R	West	5
Dufferin	Melbourne	G.T.R	West	5
Dunn Ave	King	G.T.R	East	6
Davenport Rd	Hazelton	Avenue Rd.	North	4
Dovercourt Rd	Dundas	McKenzie	West	5
Delaware	Hepbourne	Bloor	West	5
Dowling	King.	Queen	West	5
Dunn	King.	Queen	West	5
Dowling	King.	Queen	East	5
Dunn	King.	Queen	East	5 6
Elm Grove	King.	Melbourne	West	5
Elliott	Broadview	Bolton	North	4
Euclid	Ulster	Bloor	West	6
Elm	Yonge	Terauley	South	6
Earl	Sherbourne	Huntley	North	5
Elm Ave	Sherbourne	Glen Rd	South	5
Elm Grove	Queen	Melbourne	West	5
Elmsley Pl.	St. Joseph	323 ft. north	Both	4
Elm Ave	Glen Rd	Nanton Cresc	South	5
Front	Princess	Berkeley	North	6
First Ave	Logan	157 ft. east	North	4
First Ave	De Grassi	Logan	South	5
Front	Lorne	311¼ ft. west	South	6
Front	Jarvis	West Market	South	18
Gwynne	King	Queen	West	5
Gwynne	King	Queen	East	5
Gould	Dalhousie	Church	South	6
George	Wilton.	Gerrard	East	5
George	50 ft. south Queen.	Britain	East	8
Grange	Denison	Hackney	North	5
George	Wilton	Gerrard	West	5
Hayter	Yonge	Terauley	South	5
Huron	Division	Russell	West	5
Howie	Clark	468 ft. north	East	4
Huron	D'Arcy	145 ft. north	West	6
Huron	Bernard	Dupont	East	5
Hamilton	Paul	Elliott	East	4
Huntley	Isabella	Earl	East	5
Harrison	Lakeview	Dovercourt	South	4
Harbord	Bathurst	Markham	North	5
Huron	College	Russell	East	5
Jameson	King	G.T.R. tracks	East	5
Jameson	King	G.T.R. tracks	West	5
Jarvis	King	52½ ft. s. of Adelaide	West	11
King	Sumach	St. Paul	North	8
King	Dufferin	Dowling	South	6
King	39 ft. e. of Princess	Berkeley	North	12

CONCRETE SIDEWALKS—*Continued.*

Length.		Curb.		Completed.	Contractor.
		Class.	Length.		
lin. ft.	in.				
1,569		5-in	Concrete	Oct. 13, 1902	A. Chamberlain & Co.
2,324		None	.....	Oct. 4, 1902	W. F. Grant & Co.
1,592		5-in.....	Concrete	Aug. 15, 1902	" "
507	5	None	.....	July 21, 1902	City of Toronto.
585		5-in.....	Concrete	July 8, 1902	W. R. Payne.
773	8	None	.....	May 15, 1902	"
1,182	2	None	.....	May 12, 1902	A. Gardner & Co.
1,179		5-in.....	Concrete	May 14, 1902	W. F. Grant.
1,136	5	None	.....	April 26, 1902	W. R. Payne.
1,180		5-in.....	Concrete	May 23, 1902	W. F. Grant.
569	4	5-in.	"	June 14, 1902	"
826		None	.....	May 30, 1902	R. A. Rogers & Co.
1,866	5	None	.....	May 5, 1902	Crescent Concrete Co.
715	5	None	.....	Sept. 16, 1902	A. Gardner & Co.
609	3	None	.....	Aug. 8, 1902	A. Chamberlain & Co.
739		None	.....	Aug. 19, 1902	R. A. Rogers & Co.
570	5	5-in.....	Concrete	Sept. 15, 1902	W. F. Grant & Co.
546	5	None	.....	Sept. 16, 1902	Harvard & Leach.
826	9	None	.....	Oct. 28, 1902	A. Gardner & Co.
403	6	None . .	.....	Dec. 2, 1902	" "
170	5	5-in.....	Concrete	Sept. 23, 1902	City of Toronto.
829		None	.....	July 23, 1902	A. Gardner & Co.
328	3	None	.....	July 15, 1902	A. Chamberlain & Co.
38	1	4-in	Stone	June 3. 1902	City of Toronto.
1,136	5	5-in	Concrete	July 10, 1902	W. F. Grant & Co.
1,136	5	5-in	"	July 10, 1902	" " "
129	6	4-in.....	Stone	May 21, 1902	City of Toronto.
1,210	1	5-in.....	Concrete	May 31, 1902	" "
64	8	None	.....	Aug 16, 1902	" "
346	9	None	.....	Oct. 8, 1902	" "
1,221		5-in.....	Concrete	Nov. 5, 1902	Toronto Conc. & Paving Co.
705	3	5-in.....	"	Sept. 18, 1902	Crescent Concrete Co
304	7	None	"	Sept. 20, 1902	R. A. Rogers & Co.
468	7	None	.....	Sept. 17, 1902	City of Toronto
160		None	.....	July 15, 1902	" "
969		None	.....	July 11, 1902	Crescent Concrete Co.
699		5-in.	Concrete	June 30, 1902	City of Toronto.
291	6	None	.....	April 30, 1902	R. A. Rogers & Co.
460		4-in.	Stone	May 1, 1902	City of Toronto.
265	3	None	.....	April 18, 1902	Crescent Concrete Co.
602	2	None	.....	June 26, 1902	R. A. Rogers & Co.
1,242		None	.....	Sept. 11, 1902	W. R. Payne.
1,218	2	None	.....	Aug. 9, 1902	"
345	3	5-in.....	Concrete	Aug. 23, 1902	"
351		None	.....	June 24, 1902	A. Gardner & Co.
2,865	4	None	.....	June 16, 1902	" "
613	3	None	.....	June 16, 1902	A. Gardner & Co.

CONCRETE SIDEWALKS—*Continued.*

Street.	From.	To.	Side.	Width. ft.	in.
King	23 ft. e. of George	Sherbourne	North	12	
King	Niagara	Walnut	South	6	
King	Sherbourne	Princess	North	11	
King	George	Frederick	South	12	
King	Wilson	Queen	North	6	
King	Stafford	Strachan	South	6	
King	Trinity	65 ft. East	South	10	
Logan Ave	Queen	2 ft. s. of G.T.R.	West	5	
Logan Ave	Gerrard	2 ft. n. of G.T.R.	West	5	
Linden Ave	Huntley	73 ft. w. of Sherb'ne	South	6	
Lakeview Ave	Dundas	Harrison	West	6	
Lowther	Bedford	Admiral	North	5	
Madison	Bernard	Dupont	East	5	
Manning	Harbord	836 ft. North	West	5	
Murray	Caer Howell	Orde	East	5	
Madison	Bernard	Dupont	West	5	
Maple	Glen Rd	256 ft. East	North	6	
McGill	Yonge	197 ft East	South	10	
McGill	Yonge	Church	North	5	
Maynard	King	Leopold	East	5	
Maynard Ave	King	Leopold	West	5	
Morse	Eastern	1095 ft. South	East	5	
Mansfield	Claremont	Bellwoods	South	5	
Northumberland	Delaware	Dovercourt	North	4	
O'Hara	Queen	Maple Grove	East	5	
Ontario	Carlton	Gerrard	"	5	
Ontario	Wilton	Gerrard	"	5	5
Ontario	Gerrard	Carlton	West	5	
Oak	Sackville	Sumach	North	5	
Peter	King	Queen	West	5	
Parliament	1st lane n. Wilton	Carlton	"	6	
Parliament	Wellesley	Howard	"	5	
Park Rd.	Crescent Rd.	South Drive	Both	4	
Parliament	Queen	St. David	East	8	
Parliament	Wilton	Orford	"	8	
Phœbe	Spadina	291 ft. e. of Huron.	North	5	
Parliament	Winchester	Amelia	East	6	
Queen	Bellwoods	200 ft. e. of Crawford	North	8	
Queen	River	418 ft. east	"	6	
Queen	Bathurst	Tecumseth	South	12	
Queen	Pape	73 ft. west	"	11	
Queen's Park	St. Alban	539 ft. 6 ins. south	East	6	
Queen	Crawford	46 ft. e. Dundas	North	11	
Queen	Sherbourne	Ontario	South	12	
Queen	Ontario	Parliament	"	10	
Queen	West Lodge	82 ft. e. of Lansdowne	North	12	

CONCRETE SIDEWALKS.—*Continued.*

Length.		Curb.		Completed.	Contractor.
		Class.	Length.		
lin. ft.	in.				
557	5	None	.....	May 31, 1902	A Chamberlain & Co.
251		None	.....	May 10, 1902	Crescent Concrete Co.
308	2	None	.....	May 14, 1902	A. Chamberlain & Co.
289	2	None	.....	July 11, 1902	City of Toronto.
1,383		None	.....	Aug. 2, 1902	W. R. Payne.
288	5	None	.....	July 18, 1902	City of Toronto.
86	1	None	.....	Oct. 4, 1902	" "
1,529	5	None ...	.....	Nov. 11, 1902	R. A. Rogers & Co.
769		None	.....	Oct. 27, 1902	" "
512	7	None	.....	Aug. 25, 1902	A. Gardner & Co.
380	4	None	.....	May 5, 1902	City of Toronto.
298		None	.....	April 19, 1902	W. R. Payne.
970	8	None	.....	June 18, 1902	City of Toronto.
831	7	None	.....	June 20, 1902	" "
823	7	5-in	Concrete .	May 7, 1902	A. Gardner & Co.
970	2	None	.....	June 3, 1902	City of Toronto.
271	1	None	.....	Aug. 23, 1902	R. A. Rogers & Co.
196	7	None	.....	Aug. 28, 1902	" "
924	2	5-in	Concrete..	Aug. 30, 1902	City of Toronto.
537		None	.....	Sept. 27, 1902	Crescent Concrete Co.
538		None	.....	Oct. 1, 1902	" "
1,100		None	.....	Oct. 11, 1902	A. Gardner & Co.
309	3	None	.....	Nov. 12, 1902	Toronto Con. & Pav. Co.
282	5	5-in.	Concrete	Sept. 15, 1902	City of Toronto.
451	2	5-in.....	"	June 10, 1902	W. R. Payne.
710	3	5-in.....	"	Aug. 21, 1902	W. F. Grant & Co.
1,045	5	5-in.....	"	" 16, 1902	Harvard & Leach.
711		5 in.....	"	" 26, 1902	" "
640	5	5-in.	"	Sept. 16, 1902	R. A. Rogers & Co.
1,107	5	5-in.....	"	Oct. 22, 1902	Crescent Concrete Co.
1,576	3	None	.....	Sept. 13, 1902	Harvard & Leach.
1,154	6	None	.....	Aug. 27, 1902	A. Chamberlain & Co.
1,561	5	None	.....	" 20, 1902	A. Gardner & Co.
910		None	.....	July 30, 1902	Harvard & Leach.
208	5	None	.....	Aug. 1, 1902	R. A. Rogers & Co.
762	4	None	.....	May 12, 1902	Harvard & Leach.
512	3	None .. .	.....	June 18, 1902	A. Chamberlain & Co.
928		6-in.....	Concrete	Nov. 21, 1902	A. Gardner & Co.
443	9	None	.....	Oct. 25, 1902	W. R. Payne.
674	5	None	.....	" 7, 1902	" "
86	6	None	.....	Sept. 23, 1902	City of Toronto.
563	6	None	.....	" 22, 1902	Harvard & Leach.
887	8	6-in.....	Concrete	" 3, 1902	W. R. Payne.
445	4	None	.....	Aug. 14, 1902	City of Toronto.
641	7	None	.....	May 21, 1902	Harvard & Leach.
209	7	4-in.....	Stone	" 7, 1902	City of Toronto.

CONCRETE SIDEWALKS.—*Continued.*

Street.	From.	To.	Side.	Width. ft.	in.
Queen	St. Paul	Sumach	South	6	
Queen	Sumach	River	North	6	
Robert	Harbord	Sussex	East	5	5
Robert	Willocks	Harbord	"	5	
Robert	Sussex	Bloor	"	5	
Spadina	King	Front	"	6	
South Drive	Glen Rd	132 ft. east	South	4	
Shuter	Yonge	Church	North	6	
St. Clarens	College	Bloor	Both	5	
Sydenham	Berkeley	Parliament	South	5	
Smith	Broadview	365 ft. east	South	5	
Sydenham	Sumach	Sackville	South	5	
St. Andrews	Spadina	Kensington	"	5	
Sackville	Gerrard	Spruce	West	5	
Sullivan	Beverley	Huron	North	5	
Spadina Rd.	Bernard	Dupont	East	5	
Simpson	Broadview	Howland Rd	North	5	
Sackville	Carlton	Winchester	West	5	
Soho	Queen	Phœbe	Both	5	
Selby	Sherbourne	Huntley	South	5	
Sword	Gerrard	Spruce	East	5	
Shuter	Church	Jarvis	North	6	
Spadina Cres.	w. s. Spadina n.	w. s. Spadina s.	West	6	
South Drive	South Drive running north	Dunbar	South	3	7
Sussex Ave	Spadina	Robert	"	5	
Spencer	Huxley	189 ft. south	West	5	
St. George	Bernard	Dupont	"	5	
Sherbourne	Queen	Wilton	"	6	
Spencer	Huxley	189 ft. south	East	5	
Tecumseth	Queen	Defoe	"	5	
Teraulay	Gerrard	84 ft. s. of College	West	5	
Tyndall	King	Springhurst	"	6	
Victor Av	Broadview	Logan	North	5	
Wilton Av.	Seaton	Ontario	"	6	
Westmarket	Esplanade	Front	West	8	
Wellington	John	106 ft. 6 ins. e. of Dorset	North	6	
Willocks	Spadina	Robert	South	6	
Wellesley Av	Wellesley St.	249 ft. north.	Both	4	
Winchester	Rose	Parliament	North	5	
Wellesley St.	Ontario	38 ft. w. of Rose	"	5	
Wellesley St.	E. limit No. 444	124 ft. e. of Parkview	"	4	
Wellesley	Homewood	Jarvis	"	6	
Winchester	Parliament	Ontario	South	5	
Wilton Av.	Ontario	Reid's lane	"	8	

CONCRETE SIDEWALKS.—*Continued.*

Length.		Curb.		Completed.	Contractors.
		Class.	Length.		
lin. ft.	in.				
396	2	.....	.....	June 4, 1902	City of Toronto.
633	5	None	....	" 9, 1902	" "
553	8	None	.....	May 20, 1902	" "
618	7	None	.....	" 17, 1902	" "
750		None	.....	" 1, 1902	Harvard & Leach.
991	7	None	.....	July 24, 1902	Crescent Concrete Co.
141	5	5-in.....	Concrete..	Nov. 20, 1902	City of Toronto.
806	5	None	.....	" 25, 1902	A. Gardner & Co.
5,381	5	5-in.....	Concrete	" 10, 1902	W. F. Grant & Co.
298	6	5-in.....	"	Oct. 10, 1902	R. A. Rogers & Co.
367	2	None	.....	" 8, 1902	" " "
642	5	5-in.....	Concrete .	Sept. 30, 1902	R. A. Rogers & Co.
413		5-in.....	Concrete .	" 19, 1902	W. F. Grant & Co.
436		None	.....	July 26, 1902	City of Toronto.
603	1	5-in.	Concrete .	" 17, 1902	Harvard & Leach.
971	8	None	.....	" 5, 1902	Crescent Concrete Co.
1,493		None	.....	" 9, 1902	A. Chamberlain & Co.
469		None	....	" 8, 1902	R. A. Rogers & Co.
770	5	5-in.....	Concrete .	May 9, 1902	W. F. Grant.
581		None	....	" 6, 1902	W. R. Payne.
417		None	....	April 25, 1902	City of Toronto.
550	9	None	.....	May 1, 1902	A. Chamberlain & Co.
652		None	.....	April 17, 1902	Harvard & Leach.
90	6	5-in.....	Concrete .	" 4, 1902	A. Gardner & Co.
418	2	None	.....	June 3, 1902	Crescent Concrete Co.
200		5-in.....	Concrete	" 20, 1902	" "
982		None	.....	" 23, 1902	W. R. Payne.
1,341	7	None	.....	" 25, 1902	Harvard & Leach.
207	6	5-in.....	Concrete	" 20, 1902	Crescent Concrete Co.
686	2	None	.....	Oct. 18, 1902	W. R. Payne.
725	4	5-in.	Concrete	Sept. 8, 1902	A. Gardner & Co.
1,474	7	None	.....	May 29, 1902	W. R. Payne.
1,966		None	.....	July 16, 1902	A. Gardner & Co.
242	6	None . ..	.....	June 12, 1902	City of Toronto.
346	4	None	.....	" 24, 1902	Crescent Concrete Co.
297	2	None	.....	May 21, 1902	" "
389	2	None ...	.....	April 23, 1902	Harvard & Leach.
527	5	5-in.	Concrete .	Aug. 30, 1902	A. Gardner & Co.
308	5	None	.....	July 26, 1902	" "
255	1	None	.....	" 28, 1902	City of Toronto.
281	6	None	.....	" 30, 1902	A. Gardner & Co.
482	6	None	.....	Aug. 14, 1902	A. Chamberlain & Co.
656	3	None	....	Oct. 9, 1902	A. Gardner & Co.
145	9	None	.....	Aug. 30, 1902	Harvard & Leach.

CONCRETE SIDEWALKS.—*Continued.*

Street.	From	To	Side.	Width. ft.	in.
Wilton	Sherbourne	Seaton	South	6	
York	King	Queen	East	11	
York	King	Queen	West	11	
Church	Queen	405 ft. 10 in. north	East	8	
Duke	Jarvis	Sherbourne	North	6	
Glen Rd.	Maple Av.	53 ft. north	East	5	
Court House Sq.	Rear of Monetary	Times	"	6	
College	Opp. Frazee's ware	house	South	6	
Christie	Opp. Nos. 16 and 18		West	5	
Albert	Opp. S. A. Temple.		North	16	7
Wellington	Opp. No. 66		"	10	8
Queen	Fuller	84½ ft. west	"	11	5
Trinity Sq	Yonge	1st lane west	South	9	
Howard	Sherbourne	1st lane east	"	8	
Grange Av	Denison	1st lane east	North	5	
Glen Rd	Opp. No. 54		West	5	
Crescent Rd	Opp. No. 178		East	6	
Frederick	King	53 ft. 5 in. north	"	6	
Front	Ontario	255 ft. east	North	6	
Front	Opp. No. 376	No. 386	"	6	
Edward	Opp. No. 120	No. 122	"	10	3
McCaul	Opp. Nos. 17 and 19		East	6	
McCaul	Renfrew Pl	35 ft. 2 in. south	"	12	
Pearl	York	81 ft. 8 in. east	South	7	3
Station	York	40 ft. 6 in. west	"	5	
York	Station	50 ft. south	West	10	5
Maple Av	Opp. Glen Rd		North	5	
Maple Av	S.-w. cor. Powell		South	5	
Maple Av	Opp. No. 40		North	6	
South Drive	Opp. No. 9		South	4	
Queen	Opp. Postal Stat. C		"	10	
South Drive	Opp. No. 15.		"	4	
Laburnam	Jameson	Westerly	North	5	
Avenue Rd	North City limit	178 ft. south	West	6	
Bedford Rd	Opp. No. 10		"	5	
Crescent Rd	Opp. Nos. 185 and	175	South	5	
Crescent Rd	Opp. Nos. 149 and	151	"	4	
Crescent Rd	Opp. No. 145		"	4	
First Av	Bolton	77 ft. 9 in. west	"	5	
Teraulay	Queen	32 ft. north	West	14	8
Bellwoods	Opp. Nos. 235, 237,	239 and 241	East	5	
Russell	Spadina	88 ft. west	South	4	
Wellesley Cr	Homewood Pl	136 ft. west	North	6	
Glen Rd	53 ft. n. of Maple	111 ft. further north	East	5	
Howard	Opp. No. 17		South	7	5
King West	Opp. No. 96		North	12	
Parliament	King	143 ft. 5 in. south	East	7	

CONCRETE SIDEWALKS.—*Continued.*

Length.		Curb.		Completed.	Contractor.
		Class.	Length.		
lin. ft.	in				
374		None		Nov. 22, 1902	R. A. Rogers & Co.
1,049	1	None		Aug. 16, 1902	Dom. Pav. & Con. Co.
1,069	5	None		July 31, 1902	" " "
405	3	None		Dec. 3, 1902	Crescent Concrete Co.
445		None		not completed	A. Gardner & Co.
56		None		Aug. 23, 1902	R. A. Rogers & Co.
28	5				Private.
50	5				"
67	2				"
113	4				"
54					"
103	6				"
101	4				"
113	9				"
115	5				"
68					"
78	4				"
53	6				"
255	9				"
100	6				"
41					"
29	8				"
35	2				"
81	8				"
40	6				"
54					"
48	6				"
37	6				"
62	8				"
49	5				"
107	2				"
32	8				"
193	2				"
178					"
49	5				"
162	6				"
90	4				"
30	2				"
77	9				"
32	6				"
50					"
88					"
136	4				"
110	9				"
21					"
40	2				"
143					"

CONCRETE SIDEWALKS.—*Continued.*

Street.	From	To	Side.	Width.
				ft. in.
Yonge	Opp. Nos. 182 and	184	West	12
Yonge	Opp. No. 188		"	12
King	Victoria	East	South	12
Victoria	King	104 ft. south	East	6
St. Patrick	Denison	126 ft. west	South	6
Wellesley	At north-east corner	of Ontario		5

BRICK SIDEWALK.

Sherbourne	Bridge	Ancroft	East	6

WOOD CURBING.

Concord Av	Dewson	180 ft. s. of Heb'rne	East	

STONE CURBING.

Dunbar Rd	Elm Av	South Drive	East	
York	King	Queen	"	
York	King	Queen	West	

CONCRETE SIDEWALKS.—*Continued.*

Length.	Curb.		Completed.	Contractor.
	Class.	Length.		
hm. ft. in.				
45 2	.....	.....	.....	Private
22 5	.....	.....	.....	"
171	.....	.....	.....	"
104	.....	.....	.....	"
126 4	.....	.....	.....	"
14 3	.....	.....	.....	"

BRICK SIDEWALK.

255 5	None	.....	May 26, 1902	A. J. Brown.

WOOD CURBING.

.....	4 x 10 wood	.....	.....	.....

STONE CURBING.

.....	4-in.	Stone	.....	City of Toronto.
....	4-in.....	" . ..	.....	" "
....	4-in.....	"	.....	" "

During the year we were awarded contracts by tender for the construction of ten macadam roadways, three brick pavements, three track allowance re-construction works and three stone curbing works, and by order of Council were given one macadam roadway, one new track allowance construction, and two track allowance re-construction works, making a total of 23 pavements constructed during the year by day labor, which is also a record for day labor construction.

A list of these, giving class of pavements, lengths, square yards, the City's tender, the next lowest tender, actual cost of work, etc., is given in Table No. 10. A comparison shows the loss or gain as compared with the contractor's tender. The difference in favor of the City shows a gain to the property owners of $8,237.88, to which should also be added the cost of inspection which would have been incurred had these been done by a contractor.

Great difficulty was experienced by us in securing materials for works under construction, and I would strongly recommend the purchase by the City of a stone quarry, and also of the setting aside by the City of a certain sum for buying brick bats, etc., etc., at spot cash prices. If the City is to continue to do much work by the day labor system, the saving in cost and time will easily pay the interest on the increased capital expenditure.

In addition to the amounts mentioned above as being saved, we also claim credit for a saving of $1,717 made where our tenders were the lowest and contractors accepted the contracts at our figures, the saving mentioned being the difference in the tenders.

Table No. 7 shows in detail all the pavements, roadways and permanent sidewalks constructed during the year. Table No. 11 shows the amount (in miles) of concrete and brick walks constructed in the City from the year 1899. A reference to this table will show that the walks constructed during 1902 are $48\frac{3}{4}$ per cent. of the total up to the end of 1901, and $32\frac{3}{4}$ per cent. of the total constructed to date. Table No. 12 gives in detail the number of local improvement works constructed from 1892 to 1902 inclusive.

Respectfully submitted,

CHAS. W. DILL,
Assistant Engineer

TABLE No. 8.

Class of Pavement.	Total sq. yds. in City.	Total miles in City.	Square yards laid in 1902.	Miles laid in 1902.	Year first laid	Maximum grade of pavement.	Guaranteed period of yrs.	Maximum cost per sq. yd. 1902.	Minimum cost per sq. yd. 1902	Average cost per sq. yard 1902.
Asphalt	745,727	39.75	85,006	5.237	1888	4.41 in 100	10	$2.60 (heavy) 2.15 (light)	$2.45 (heavy) 1.66 (light)	$2.54 (heavy) 2.01¼ (light)
Brick on concrete	176,082	25.667	15,215	.994	1893	3.10 in 100	5	$2.25 on 6" con. 1.85 " 4" "	$2.20 on 6" con. 1.77⅔ " 4" "	$2.23 on 6" con. 1.82⅘ " 4" "
Brick on broken stone	15,031	.842	.....	.....	1899	.....	5	.....	.....	None laid in 1902
Brick on gravel	32,009	2.218	.....	.....	1896	.....	5	.....	.....	.....
Cedar block	1,484,273	70.02	31,768	2.190	1881	2.32 in 100	1& 5	Reconst'tion .70 On tar'd b'ds1.31	Recons'tion.66⅕ On t'r'd b'ds1.30	Reconst'tion .67⅗ On tar'd b'ds1.30½
Gravel	76,862	.794	.....	.....	1880	.....	1	....	.....	None laid in 1902
*Scoria and granite	41,638	.81	.....	....	1884	1.80 in 100	1	.....	.....	.....
†Macadam	748,083	54.00	77,695	5.486	....	4.76 in 100	1	$1.37½	$0.70	Depth of stone varies from 8 to 16 inches.

* Street railway track allowance not included in total mileage.

† Including tar macadam.

TABLE No. 9.

CONCRETE WALKS CONSTRUCTED BY DAY LABOR DURING 1902.

Street.	Side.	From	To	Width in ft.	Kind of Curbing Constructed with Walk.
Crescent Rd	N	West side No. 162	East side No. 166	5	
George	E	Britain	50 ft. S. of Queen	8	
South Drive	S	Glen Rd	132 ft. E	4½	Concrete
Agnes	S	Chestnut	Centre Ave	5	"
Huron	W	D'Arcy	145 ft. N	6	
Crawford	E	Queen	109 "	5	
Queen	S	Pape Ave	73 ft. W	11	
King	S	Trinity	65 ft. E	10	
First Ave	N	Logan Ave	157 "	4	Concrete
Grange Ave	N	Denison Ave	Hackney	5	
Court	N	Church	107 ft. W	8	Concrete
Beatrice	B S	College	422 ft. N	4	
Howie Ave	E	Clark	468 "	4	
Queen	N	82 ft. E. Lansdowne Av.	West Lodge	12	Stone
Bernard Ave	S	Bedford Rd	141 ft. W	5	
Davenport Rd	N	Avenue Rd	Hazleton Ave	4	
Balmuto	W	Czar	Bloor	5	
"	E	"	"	5	
Queen	N	Sumach	River	6	
"	S	St. Paul	Sumach	6	
Czar	N	Yonge	Balmuto	5	
Gould	S	Church	Dalhousie	6	Stone
Beverley	E	Queen	Grange Ave	6	
Harrison	S	Dovercourt Rd	Lakeview Ave	4	Stone
Sword	E	Gerrard	Spruce	5	
Northumberland	N	Delaware Ave	Dovercourt Rd	4	Concrete
Bernard Ave	S	Madison Ave	Spadina Rd	5	"
Sackville	W	Gerrard	Spruce	5	
Robert	E	Wilcox	Harbord	5	
"	E	Harbord	Sussex Ave	5½	
Wilton Ave	N	Seaton	Ontario	6	
Lakeview Ave	W	Dundas	Harrison	6	
Bleecker	W	Carlton	Wellesley	5	
Hamilton	E	Paul	Elliot	4	Concrete
King	S	Stafford	Strachan Ave	6	
McGill	N	Yonge	Church	5	Concrete
Crawford	E	126 ft. N. Queen	680 ft. further N.	5	
Madison Ave	E	Bernard Ave	Dupont	5	
"	W	"	"	5	
Bolton Ave	W	Queen	Gerrard	5	
Manning Ave	W	Harbord	836 ft. N	5	
Carlaw Ave	W	Eastern Ave	1,057 ft. S	5	Concrete
George	E	Wilton Ave	Gerrard	5	"
King	S	George	Frederick	12	
Queen	S	23 ft. E. Sherbourne	Ontario	12	
Wellesley	N	Ontario	38 ft. W. Rose Av.	5	

TABLE No. 9.

Concrete Walks Constructed by Day Labor During 1902.

City's Tender per lin. ft.	Next Lowest Tender per lin. ft.	Actual Cost of Work Included in Tender per lin. ft.	Cost of Work not Included in Tender.	Cost of Work Included in Tender.	Total Cost of Work Exclusive of Interest on Money.	Total Cost of Work Based on Contractors' Lowest Tender.	Difference Between Cost —City's and Next Lowest Tender.	
							Gain.	Loss.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
No t'nd'r	No t'nd'r	64 67/100	.....	124 62	124 62	.....	No t'd'r	No t'r
"	"	1 60 4/10	.....	103 95	103 95	.....	"	"
"	"	98 1/4	1 30	139 01	140 31	.....	"	"
"	"	1 06 3/4	.....	263 65	263 65	.....	"	"
"	"	76 9/10	.....	123 07	123 07	.....	"	"
"	"	63 93/100	.....	61 19	61 19	.....	"	"
"	"	1 82 9/10	30 82	129 48	160 30	.....	"	"
"	"	1 94 3/4	39 96	125 99	165 95	.....	"	"
"	"	99 27/100	5 88	156 35	162 23	.....	"	"
65	"	69 53/100	.....	241 20	241 20	225 49	"	15 71
2 10	"	1 46 1/3	....	157 00	157 00	225 33	68 33	....
56	"	52 1/3	.....	441 02	441 02	472 08	31 06	....
55	"	49 55/100	.....	233 25	233 25	257 78	24 53	....
1 85	2 16	2 10 4/10	40 11	415 94	456 05	467 14	11 09	....
56	62	67 4/10	.....	106 50	106 50	97 96	.....	8 54
52	55	45 86/100	.....	232 73	232 73	279 12	46 39	....
63	68	52 3/10	7 91	283 44	291 35	376 47	85 12	....
63	68	60 45/100	.....	323 55	323 55	363 93	40 38	....
75	81	77 21/100	.....	489 12	489 12	513 13	24 01	....
75	84	62 79/100	....	248 76	248 76	332 81	84 05	...
65	68	63 2/3	.....	188 69	188 69	201 55	12 86	....
1 38	1 49	1 14 13/100	50 64	120 52	171 16	207 98	36 82	....
75	84	65 97/100	.....	506 10	506 10	644 45	138 35	....
1 15	1 21	1 02 1/2	21 56	431 76	453 32	531 57	78 25	....
65	67 1/2	62 3/4	.....	261 56	261 56	281 47	19 91	....
1 05	1 19	98 16/100	.....	277 30	277 30	336 17	58 87	....
1 15	1 19	1 25 8/10	.....	329 54	329 54	311 78	.....	17 76
67	67 1/2	67 8/10	.....	295 62	295 62	294 30	.....	1 32
65	68	53 64/100	.....	331 85	331 85	420 71	88 86	....
70	75	62 1/10	.....	343 75	343 75	415 35	71 60	....
78	81	69 32/100	....	168 27	168 27	196 50	28 23	....
78	83	74 83/100	75 00	284 67	359 67	390 73	31 06	....
65	67 1/2	57 8/10	.....	819 13	819 13	965 25	146 08	....
1 02	1 05	80 3/4	.....	564 31	564 31	733 95	169 64	....
78	84	67 3/4	.....	195 41	195 41	242 34	46 93	....
1 15	1 20	95 25/100	.....	880 27	880 27	1,109 04	228 77	....
63	69	50 3/10	.....	339 08	339 08	467 68	128 60	....
65	70	58 1/2	.....	567 70	567 70	679 56	111 86	....
65	70	55 95/100	.....	542 76	542 76	679 14	136 38	....
65	67 1/2	56 4/10	.....	1,298 56	1,298 56	1,554 59	256 03	....
64	67 1/2	53 78/100	.....	447 30	447 30	561 40	114 10	....
1 15	1 17 1/2	92 1/2	....	972 88	972 88	1,266 65	293 77	....
1 12	1 20	77 15/100	.....	933 51	933 51	1,452 12	518 61	....
7 1/2 sq.ft.	17 1/2 sq.ft.	14 34/100	.....	488 70	488 70	596 52	107 82	.....
7 1/2 "	17 1/2 "	16	.....	866 30	866 30	948 31	82 01	....
5 lin. ft.	69 lin. ft.	55 25/100	.....	140 97	140 97	176 02	35 05	.....
			273 18	16,996 33	17,269 51	19,276 37	3,355 42	43 33

TABLE No. 10.

PAVEMENTS CONSTRUCTED BY DAY LABOR DURING 1902.

Street.	From	To	Class of Pavement.	Width in ft.	Length in ft.
Wellesley Ave...	Wellesley	249 ft. north...	3rd class mac'd'm..	16	249.0
Caer Howell	University A...	Caer Howell...	Mac'd'm recon'n..	30	257.8
Breadalbane	Yonge	St. Vincent....	" " ..	27	640.5
Walton	"	Elizabeth	" " ..	20	1,109.5
Caer Howell	McCaul	Simcoe	" " ..	24	546.7
Glen Road	Maple Ave....	S. to bridge....	2nd class mac'd'm..	24	509.7
Grange Ave.	Beverley.....	Huron.....	Mac'd'm recons'n..	24	572.0
Crescent Road...	Scarth Road...	Cluny Ave....	2nd class mac'd'm..	21	1,647.9
Noble	Brock Ave....	298 ft. east....	3rd " " ..	24	298.0
Elmsley Pl.....	St. Joseph	North end	3rd " " ..	24	323.4
Logan Ave... ..	Queen	Gerrard	2nd " " ..	24	2,367.0
Orde	McCaul	Murray	Brick on concrete..	21	456.0
York	King	Pearl	" " ..	29	225.0
Waterloo Ave.. .	Gladstone A...	Dufferin	" " ..	24	345.5
Avenue Road....	Davenport R..	C.P.R. tracks..	Bri'k on 3 in. sand.	14	1,185.0
Dundas	Bridges	Bloor	" " ..	14	3,021.0
Howard P'k A...	Dundas	Howard Pk....	" " ..	14	3,131.0
Dupont	Avenue Road..	75 ft. west of Walmer Rd...	Brick on concrete..	16½	3,063.0
Carlton	Yonge	Parliament ...	Bri'k on 3 in. sand..	14	1,535.0
Winchester.....	Parliament....	Sumach	Concrete (grano.)..	14	983.3
York, w.s.	Queen	King	4 in. stone curb...	.....	1,110.5
" e.s.	"	"	" " ..	.....	1,027.4
Dunbar Rd., e.s.	Elm Ave.....	South Drive...	" " ..	.....	646.0

TABLE No. 10.

PAVEMENTS CONSTRUCTED BY DAY LABOR DURING 1902.

City's Tender.	Next Lowest Tender.	Cost of Work not Included in Tender.	Actual Cost of Work Included in Tender.	Total Cost of Work Exclusive of Interest on Money.	Total Cost of Work, Based on Lowest Contractor's Tender.	Difference Between Cost City's Tender and Next Lowest Tender.	
						Gain.	Loss.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
450 00	475 00	.....	393 84	393 84	475 00	71 16	
584 00	900 00	82 13	601 13	683 26	982 13	298 87	
1,120 00	1,440 00	.....	926 75	926 75	1,440 00	513 25	
1,800 00	1,900 00	.....	1,536 48	1,536 48	1,900 00	363 52	
729 00	955 00	39 22	770 46	809 68	994 22	184 54	
2,300 00	2,359 00	.....	2,018 49	2,018 49	2,359 00	340 51	
975 00	1,132 00	129 00	823 39	952 39	1,261 00	308 61	
7,265 00	7,269 00	66 23	6,742 71	6,808 94	7,335 23	526 29	
825 00	962 00	43 00	780 65	823 65	1,005 00	181 35	
835 00	No tender	4 57	799 13	803 70	839 57	35 87	
No tender	"	.....	8,396 59	8,396 59	no tender	no tender	no tend'r
2,740 00	2,795 00	.....	2,581 19	2,581 19	2,795 00	213 81	
1,833 00	2,040 00	12 00	1,763 38	1,775 38	2,052 00	276 62	
2,320 00	2,326 00	.....	2,148 21	2,148 21	2,326 00	177 79	
1,800 00	1,824 00	.....	1,437 96	1,437 96	1,824 00	386 04	
5,100 00	6,599 00	.....	4,677 36	4,677 36	6,599 00	1,921 64	
5,285 00	6,771 00	.....	4,583 05	4,583 05	6,771 00	2,187 95	
No tender	No tender	.....	.....	.....	.....	no tender	no tend'r
"	"	.....	1,847 17	1,847 17	.....	"	"
"	"	.....	1,436 40	1,436 40	.....	"	"
(str'g't .60	straight .64	}	644 82	644 82	745 19	100 37	
(circ'l'r.82	circular .95						
(str'g't .60	straight .64	}	588 32	588 32	669 38	81 06	
(circ'l'r.82	circular .95						
.68	.68	.....	370 65	370 65	439 28	68 63	
		376 15	45,868 13	46,244 28	42,812 00	8,237 88	

TABLE No. 11.

GIVING MILEAGE OF CEMENT CONCRETE AND BRICK SIDEWALKS CONSTRUCTED IN THE CITY OF TORONTO.

Year.	Cement Concrete.	Brick.	Total.
	Miles.	Miles (up to this date).	Miles.
1889	1.190		1.190
1890	1.426		1.426
1891	1.950		1.950
1892	1.508		1.508
1893	2.259		2.259
1894	1.137		1.137
1895	1.918		1.918
1896	0.612	0.204	0.816
1897	1.050	0.820	1.870
1898	2.107	1.190	3.297
1899	5.470	0.290	5.760
1900	15.227	0.038	15.265
1901	17.305	0.511	17.816
1902	27.360	0.049	27.409
Totals	80.519	3.102	83.621

TABLE No. 12.

WORKS CONSTRUCTED AS LOCAL IMPROVEMENTS FROM 1892 TO 1902 INCLUSIVE.

Class of Work.	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	Total
Asphalt Pavements.	9	7	7	4	3	4	14	28	27	25	24	152
Brick "	....	....	....	2	6	16	13	23	13	7	11	91
Gravel Roadways	....	....	....	....	....	16	....	1	1	....	....	18
Cobble Stone Pav'ts.	5	....	....	....	....	....	....	....	1	....	....	6
Stone Sett "	....	....	....	....	....	....	....	....	....	1	....	1
Macadam Roadways	1	....	1	4	5	3	13	24	15	17	30	113
Cedar B'k Pavements	20	14	6	7	3	7	19	20	24	12	10	142
Concrete "	....	....	....	3	....	....	1	....	....	....	1	5
Scoria Block "	1	....	....	....	....	....	....	....	....	....	....	1
Stone Curbing	....	....	....	....	....	....	....	....	....	1	3	4
Wood "	....	....	....	....	....	....	....	....	....	3	1	4
Concrete Sidewalks.	6	3	6	11	6	13	25	37	85	118	188	498
Brick "	....	....	....	....	1	8	14	4	1	2	1	31
Stone Flag "	1	1	....	....	....	....	....	....	....	....	....	2
Totals	43	25	20	31	24	67	99	137	167	186	269	1086

Sand Grading.							Inorganic Dust Grading.				
	Pass No. 20 sieve.	Pass No. 30 sieve.	Pass No. 40 sieve.	Pass No. 50 sieve.	Pass No. 80 sieve.	Pass No. 100 sieve.	Pass No. 200 sieve.	On No. 50 sieve.	Pass No. 50 sieve.	Pass No. 80 sieve.	Pass No. 100 sieve.	Pass No. 200 sieve.
	%	%	%	%	%	%	%	%	%	%	%	%
0	2.0	3.0	8.0	25.0	17.0	29.5	14.5	0.0	0.0	1.7	12.3	86.0
0	1.0	2.0	10.0	28.0	13.0	29.0	16.0	0.0	0.0	1.5	17.0	81.5
0	9.0	18.0	18.5	35.0	8.0	6.0	3.5	4.0	4.0	2.0	18.0	72.0
0	1.5	2.5	9.0	30.5	12.0	28.0	15.5	0.0	1.0	2.0	22.0	75.0
0	3.5	5.0	9.0	28.5	10.5	25.5	16.0	0.0	4.5	10.0	40.5	43.5
0	2.0	2.5	8.5	30.0	12.0	25.0	18.0	0.0	5.0	7.0	24.0	64.0
5	1.0	2.0	8.0	32.0	11.5	31.0	14.0	0.0	5.0	5.5	43.5	45.3
0	1.5	2.0	4.5	27.0	14.5	37.5	12.0	0.0	4.0	6.5	46.5	42.0
0	2.0	6.0	14.5	41.5	13.0	15.0	7.0	10.0	13.0	7.0	18.0	52.0
0	3.0	3.0	7.0	24.0	15.5	28.0	16.0	9.0	0.0	3.0	11.5	85.0
0	1.5	3.5	12.0	33.5	15.0	26.5	8.0	0.0	3 5	6.5	43.0	47.0
0	2.0	5.0	15.0	50.5	10.0	13.5	3.0	0.5	4.0	6.5	26.0	63.0
0	2.0	5.0	9.0	27.0	11.0	31.0	14.0	0.0	0.0	1.0	19.5	79.5
0	2.0	4.0	9.0	24.0	13.5	29.0	16.5	0.0	0.0	3.0	5.0	92.0
5	3.5	5.0	15.0	32.0	9.5	17.0	10.5	2.0	5.5	4.5	27.0	61.0
0	3.0	6.0	13.5	39.0	12.0	16 5	8.0	0.0	0.0	5.0	25.0	70.0
0	3.0	6.5	17.0	34.0	9.0	16.5	11.0	4.0	10.0	7.0	21.0	58.0
5	3.0	7.0	15.5	34.0	10.0	18.0	9.5	4.0	10.0	7.0	21.0	53.0
0	3.0	6.5	18.0	32.0	9.0	19.5	10.00	6.0	7.5	6.5	11.0	69.0
0	1.0	4.0	10.0	35.0	13.0	24.0	12.0	0.0	4.0	7.0	43.0	46.0
5	1.5	3.0	11.0	32.0	15.0	23.0	12.0	0.0	5.0	8.0	41.0	46.0
0	1.2	6.0	11.7	36.6	12.0	20.8	10.0	2.0	10.0	8.0	19.0	59.0
0	1 0	3.0	8.0	30.0	11.0	30.0	17.0	.....	25.0	9.0	16.0	48.0

DETAILED ANALYSIS OF ASPHALT MIXTURES, 1902.

Street.	From	To	Contractor.	Asphalt used.	Bitumen in Paving Mixture in per cent.	Refined Asphalt. Physical Examination. Specific Gravity.	Refined Asphalt. Physical Examination. Flowing Point.	Refined Asphalt. Chemical Analysis. Bitumen. Petrolene	Refined Asphalt. Chemical Analysis. Bitumen. Asphaltene	Refined Asphalt. Chemical Analysis. Organic matter (non-bituminous).	Refined Asphalt. Chemical Analysis. Inorganic Matter.	Penetration of Asphaltic Cement. Dow's Machine.	Sand Grading. On No. 10 sieve.	Sand Grading. Pass No. 10 sieve.	Sand Grading. Pass No. 20 sieve.	Sand Grading. Pass No. 30 sieve.	Sand Grading. Pass No. 40 sieve.	Sand Grading. Pass No. 50 sieve.	Sand Grading. Pass No. 80 sieve.	Sand Grading. Pass No. 100 sieve.	Sand Grading. Pass No. 200 sieve.	Inorganic Dust Grading. On No. 50 sieve.	Inorganic Dust Grading. Pass No. 50 sieve.	Inorganic Dust Grading. Pass No. 80 sieve.	Inorganic Dust Grading. Pass No. 100 sieve.	Inorganic Dust Grading. Pass No. 200 sieve.
					%								%	%	%	%	%	%	%	%	%	%	%	%	%	%
Albany Ave	Bloor St	Wells St	Barber Asphalt Co.	Trinidad "Pitch Lake"	10.76	1.3877	195°F					87°	0.0	1.0	2.0	3.0	8.0	25.0	17.0	29.5	14.5	0.0	0.0	1.7	12.3	86.0
Alexander St	Church St	McMillan St	"	" "	9.96	1.3922	190°	39.67	18.50	8.89	32.94	54°	0.0	1.0	1.0	2.0	10.0	28.0	13.0	29.0	16.0	0.0	0.0	1.5	17.0	81.5
Baldwin St	Spadina Ave	Augusta Ave	Constructing and Paving Co.	" "																						
Bay St	King St	Front St	" "	" "	9.75	1.3905	190°					62°	0.0	2.0	9.0	18.0	18.5	35.0	8.0	6.0	3.5	4.0	4.0	2.0	18.0	72.0
Church St	Queen St	Bloor St	Barber Asphalt Co.	" "	10.65	1.3683	198°	40.89	20.97	10.74	27.40	81°	0.0	1.0	1.5	2.5	9.0	30.5	12.0	28.0	15.5	0.0	1.0	2.0	22.0	75.0
Cottingham St	Avenue Rd	Rathnally Ave	Constructing and Paving Co.	" "	9.23	1.3869	195°					63°	0.0	1.0	3.5	5.0	9.0	28.5	10.5	25.5	16.0	0.0	4.5	10.0	40.5	43.5
Elm Ave	Sherbourne St	Glen Road	" "	" "	9.73	1.3905	190°					83°	0.0	1.0	2.0	2.5	8.5	30.0	12.0	25.0	18.0	0.0	5.0	7.0	24.0	64.0
Garden Ave	MacDonnell Ave	Sorauren Ave	" "	" "	10.07	1.3987	197°					72°	0.0	0.5	1.0	2.0	8.0	32.0	11.5	31.0	14.0	0.0	5.0	5.5	43.5	45.3
Harvard Ave	Roncesvalles Ave	Callender St	" "	" "	9.51	1.3876	194°	38.73	16.39	10.08	34.80	64°	0.0	1.0	1.5	2.0	4.5	27.0	14.5	37.5	12.0	0.0	4.0	6.5	46.5	42.0
Huron St	Baldwin St	Cecil St	" "	" "																						
Louisa St	Yonge St	Terauley St	" "	" "	10.21	1.3872	190°					76°	0.0	1.0	2.0	6.0	14.5	41.5	13.0	15.0	7.0	10.0	13.0	7.0	18.0	52.0
Markham St	Arthur St	759 ft. s. of College	Barber Asphalt Co.	" "	10.52	1.3932	192°					90°	0.0	2.0	3.0	3.0	7.0	24.0	15.5	28.0	16.0	9.0	0.0	3.0	11.5	85.0
Marlborough Ave	Yonge St	1338 ft. west	Constructing and Paving Co.	" "	9.16	1.3982	200°	39.10	18.94	9.42	32.54	84°	0.0	0.0	1.5	3.5	12.0	33.5	15.0	26.5	8.0	0.0	3.5	6.5	43.0	47.0
Maynard Ave	King St	Leopold St	" "	" "	9.72	1.3837	185°					47°	0.0	1.0	2.0	5.0	15.0	50.5	10.0	13.5	3.0	0.5	4.0	6.5	26.0	63.0
Morris St	Huron St	Spadina Ave	Barber Asphalt Co.	" "	9.83	1.3905	190°					58°	0.0	1.0	2.0	5.0	9.0	27.0	11.0	31.0	14.0	0.0	0.0	1.0	19.5	79.5
Park Rd	Crescent Rd	S.S. of Bend	" "	" "	9.38	1.3870	206°					67°	0.0	1.0	2.0	4.0	9.0	24.0	13.5	29.0	16.5	0.0	0.0	3.0	5.0	92.0
Phoebe St	Spadina Ave	Soho St	Forest City Paving Co.	California 'Warren's Acme'	9.54			89.45	9.82	0.30	0.43	*83°	1.0	5.5	3.5	5.0	15.0	32.0	9.5	17.0	10.5	2.0	5.5	4.5	27.0	61.0
Sackville St	Carlton St	Winchester St	Barber Asphalt Co.	Trinidad "Pitch Lake"																						
Soho St	Queen St	Phoebe St	Constructing and Paving Co	" "	9.55	1.3872	190°					78°	0.0	2.0	3.0	6.0	13.5	39.0	12.0	16.5	8.0	0.0	0.0	5.0	25.0	70.0
Spadina Ave., w.s	Baldwin St	College St	Forest City Paving Co.	California 'Warren's Acme'	9.37							*100°	1.0	2.0	3.0	6.5	17.0	34.0	9.0	16.5	11.0	4.0	10.0	7.0	21.0	58.0
Spadina Ave	Queen St	College St	" "	" "	9.64			91.19	8.11	0.22	0.48	*104°	1.0	1.5	3.0	7.0	15.5	34.0	10.0	18.0	9.5	4.0	10.0	7.0	21.0	53.0
Spadina Ave., e.s.	Baldwin St	College St	" "	Trinidad "Pitch Lake"	9.75	1.3980	195°	43.50	21.17	6.39	28.94	105°	0.0	2.0	3.0	6.5	18.0	32.0	9.0	19.5	10.00	6.0	7.5	6.5	11.0	69.0
Spencer Ave	Huxley St	189 ft. south	Constructing and Paving Co.	" "																						
Walmer Rd. and Castle Ave.	Castle Ave	Dupont St	" "	" "	9.02	1.3933	190°	41.68	12.72	10.34	35.24	57°	0.0	1.0	1.0	4.0	10.0	35.0	13.0	24.0	12.0	0.0	4.0	7.0	43.0	46.0
Widmer St	Adelaide St	Richmond St	" "	" "	8.17	1.3872	200°	38.74	16.28	9.79	35.19	58°	0.0	1.5	1.5	3.0	11.0	32.0	15.0	23.0	12.0	0.0	5.0	8.0	41.0	46.0
Repairs.																										
Yonge St			Constructing and Paving Co.	Trinidad "Pitch Lake"	9.20	1.3847	190°					44°	0.0	1.0	1.2	6.0	11.7	36.6	12.0	20.8	10.0	2.0	10.0	8.0	19.0	59.0
King St			" "	" "	8.91	1.3905	190°					53°	0.0	0.0	1.0	3.0	8.0	30.0	11.0	30.0	17.0		25.0	9.0	16.0	48.0
Bloor St			" "	" "	10.25																					
Wellington St			" "	" "	9.95							58°														
Adelaide St., west			" "	" "	10.41							52°														
Scott St			" "	" "	9.87	1.3981	195°																			
					125 Tests							60 Tests														
*Time of Penetration	California Asphalt	1 second																								
" "	Trindad Asphalt	5 seconds																								

CEMENT TESTS. July 1st, 1901, to July 1st, 1902.

Brand.	No. of Samples	No. of Briq'tts.		Soundness.		Specific Gravity.	Residue in %			Water used in Mixing in %		Setting in Minutes.		Ultimate Tensile Strength in Pounds per square inch.										Sulph. Anhydride in %	Remarks.
														Neat.						3 parts sand to 1 part cement							
		Moulded.	Broken.	Hot Test.	Cold Test.		No. 50 Sieve.	No. 70 Sieve.	No. 100 Sieve.	Neat.	3 to 1.	Initial.	Hard.	24 hours after hard set.	7 days.	28 days.	3 months.	6 months.	1 year.	24 hours after hard set.	7 days.	28 days.	3 months.	6 months.	1 year.		
Atlas	8	136	135	O.K.	O.K.	3.178	0.0	2.6	6.8	18.7	9.3	....	....	.....	628	695	746	768	764	....	177	233	267	311	349	1.237	United States.
Beaver	82	1350	1255	O.K.	O.K.	3.181	0.3	3.1	6.8	21.1	10.0	130	276	371	563	627	669	679	683	61	183	234	267	294	338	1.556	Canadian.
Hercules	1	20	16	O.K.	O.K.	3.160	0.0	2.8	7.4	21.4	10.0	35	50	161	588	757	784	....	....	34	163	251	278	....	....	1.020	"
Lehigh	12	170	165	O.K.	O.K.	3.178	0.0	3.8	8.3	20.5	10.0	165	360	335	699	743	803	818	804	64	183	257	302	345	361	1.244	United States.
Monarch	19	372	298	O.K.	O.K.	3.182	0.0	1.2	4.2	20.6	10.0	144	272	454	681	757	797	....	....	74	187	267	328	....	....	1.476	Canadian.
Nazareth	7	125	125	O.K.	O.K.	3.169	0.0	2.7	6.9	20.6	9.9	....	....	365	707	763	796	846	821	....	195	240	302	355	394	1 271	United States.
Peninsular	4	70	70	O.K.	O.K.	3.170	0.0	1.7	4.9	21.2	10.0	....	....	....	692	735	774	812	800	....	204	270	291	348	373	1.447	"
Rathbun's Star	39	710	584	O.K.	O.K.	3.146	0.0	0.9	3.5	22.7	10.0	169	304	437	644	712	740	....	....	89	208	264	311	329	356	1.753	Canadian.
Samson	30	495	426	O.K.	O.K.	3.144	0.0	2.6	6.0	22.2	10.0	112	222	294	488	563	604	631	634	63	153	206	255	282	307	1.375	"
Saylor's	5	55	55	O.K.	O.K.	3.178	0.0	2.4	6.1	21.2	10.0	....	....	....	636	734	814	838	810	....	194	256	306	329	345	0.759	United States.
Vulcanite	1	20	16	O.K.	O.K.	3.130	0.0	5.5	7.8	21.5	10.0	160	360	307	1001	1004	1041	....	....	40	245	296	355	....	....	1.400	" "

SEWERS, DRAINS AND SPECIAL WORK.

CITY ENGINEER'S DEPARTMENT,
Toronto, Dec. 31st, 1902.

MR. C. H. RUST,
City Engineer.

DEAR SIR,—Herewith I submit the annual report, showing in detail the work done under the supervision of this branch of the Engineer's Department.

During the year the following sewers were constructed:

9-inch tile pipe	761	lin. feet.
12-inch tile pipe	2,988	"
15-inch tile pipe	600	"
15-inch tile pipe in concrete	950	"
24-inch circular brick sewer	180	"
Total	5,479	lin. feet.

There are 234.53 miles of sewers in the City.

During the year there were

32 new manholes built.
95 manholes repaired.
535 new gullies built.
108 gullies repaired.
107 miles of sewers were flushed and cleaned.

There are 68 flush tanks in the City which are inspected every week and are in good order.

GENERAL SEWER REPAIRS.

On a few streets where 18-inch tile pipe sewers had been laid without concrete covering, the pipe collapsed in places, and short lengths had to be re-constructed. In all such cases the new pipes have been protected or strengthened by a concrete arch about three inches in thickness. On Front Street, west of Spadina Avenue, 230 feet of pipe sewer had to be taken up and re-laid, as it was completely blocked with the roots of trees. Early in the year considerable labor and money was expended in repairing the invert of the Rosedale Creek sewer. Repairs which are urgently needed on several other sewers had to be laid over until some future date on account of there being insufficient funds at the disposal of the Department.

WOODBINE AVENUE DISTRICT SEWERAGE SYSTEM.

In connection with the proposed system of sewers for the district east of Woodbine Avenue, a great deal of work has been done in making surveys, preparing plans, estimates of cost, etc. The recommendation for the work, which includes the construction of a septic tank, bacteria beds and pumping plant, has been made, and it now rests with the property owners interested whether the system will be installed or not.

LOCATING OLD SEWERS.

The work of ascertaining the positions and depths of old sewers, constructed years ago, has been continued, and the information obtained from actual measurement recorded on the sewer plans.

STREET RAILWAY RECORDS.

Every month a complete record has been taken, showing the actual street car service provided by the Toronto Railway Company, on all the different routes in the City, for the purpose of ascertaining if the Company were carrying out the time table recommended by the City Engineer. The time table prepared by this Department in 1900 has not proved altogether satisfactory, the number of passengers carried having greatly increased; consequently a new time table was prepared during the latter part of December, great care being exercised in providing for sufficient accommodation during the hours of congested travel. If this new time table is adopted, much of the inconvenience caused through over-crowding should be overcome.

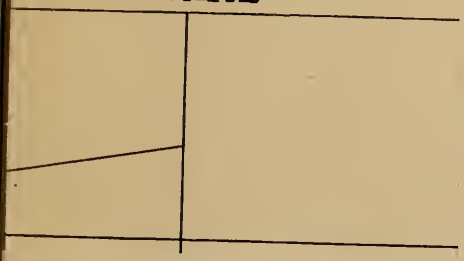
PRIVATE DRAINS.

The following is a statement showing the length in feet of the private drains constructed during the year:

Month.	6-in. ft.	9-in. ft.	18-in. ft.
January	879	121	....
February	787	96	....
March	2,283	76	....
April	2,254	525	....
May	1,459	88	....
June	1,689	198	....
July	2,386	25	....
August	2,553	190	....
September	2,468	165	....
October	3,229	102	....
November	1,558	9	....
December	894	105	33
Total	22,439	1,700	33

STS

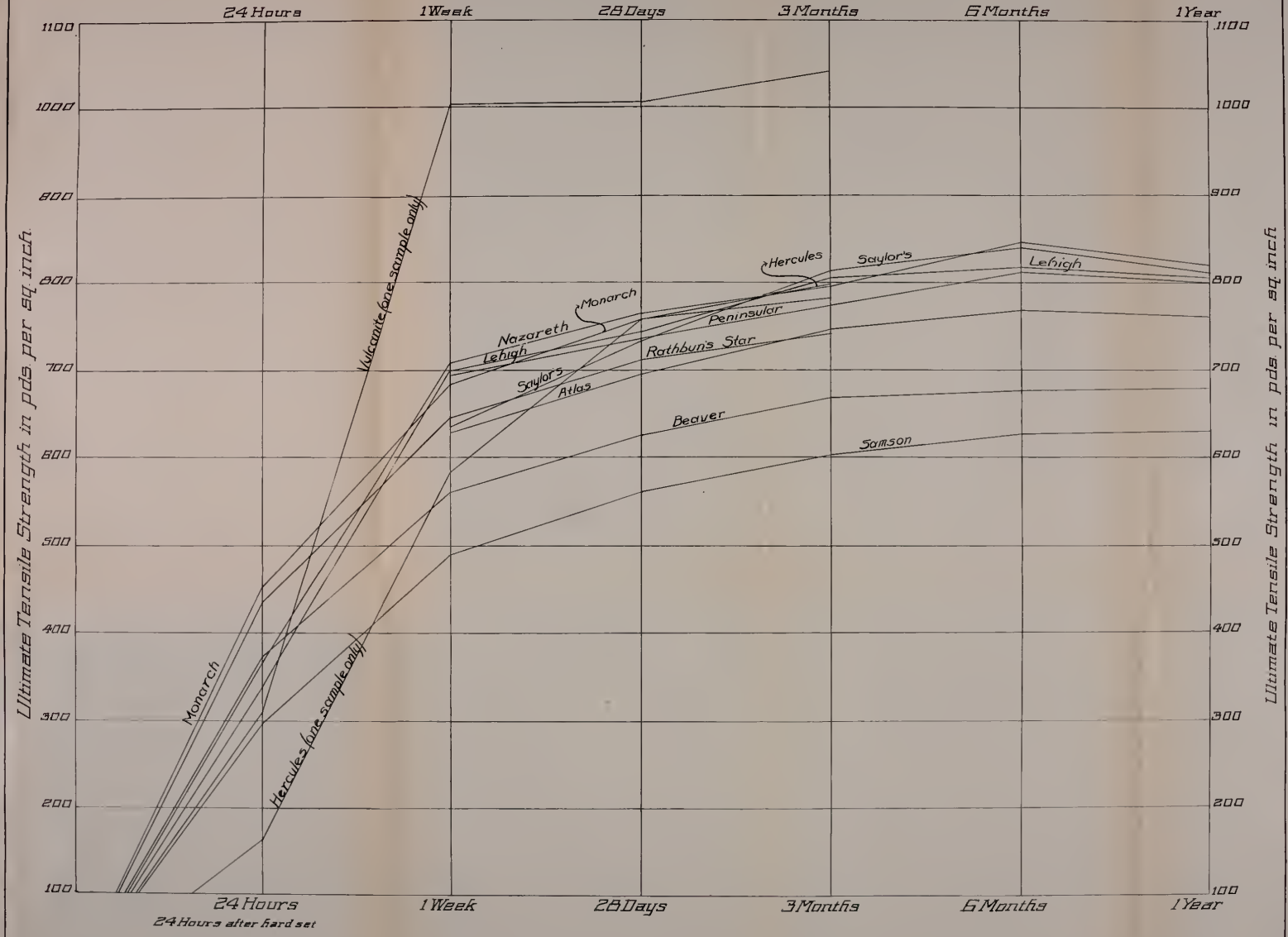
3 Months



ity Engineer's Office.

NEAT CEMENT TESTS

1902



City Engineer's Office,
Toronto, Feb. 1903

N

3.20 3.20

3.15

Specific Gravity

3.10 3.10

Specific Gravity

3.05

3.00 3.00

ty Engineer's Office,
Toronto, Feb., 1903.

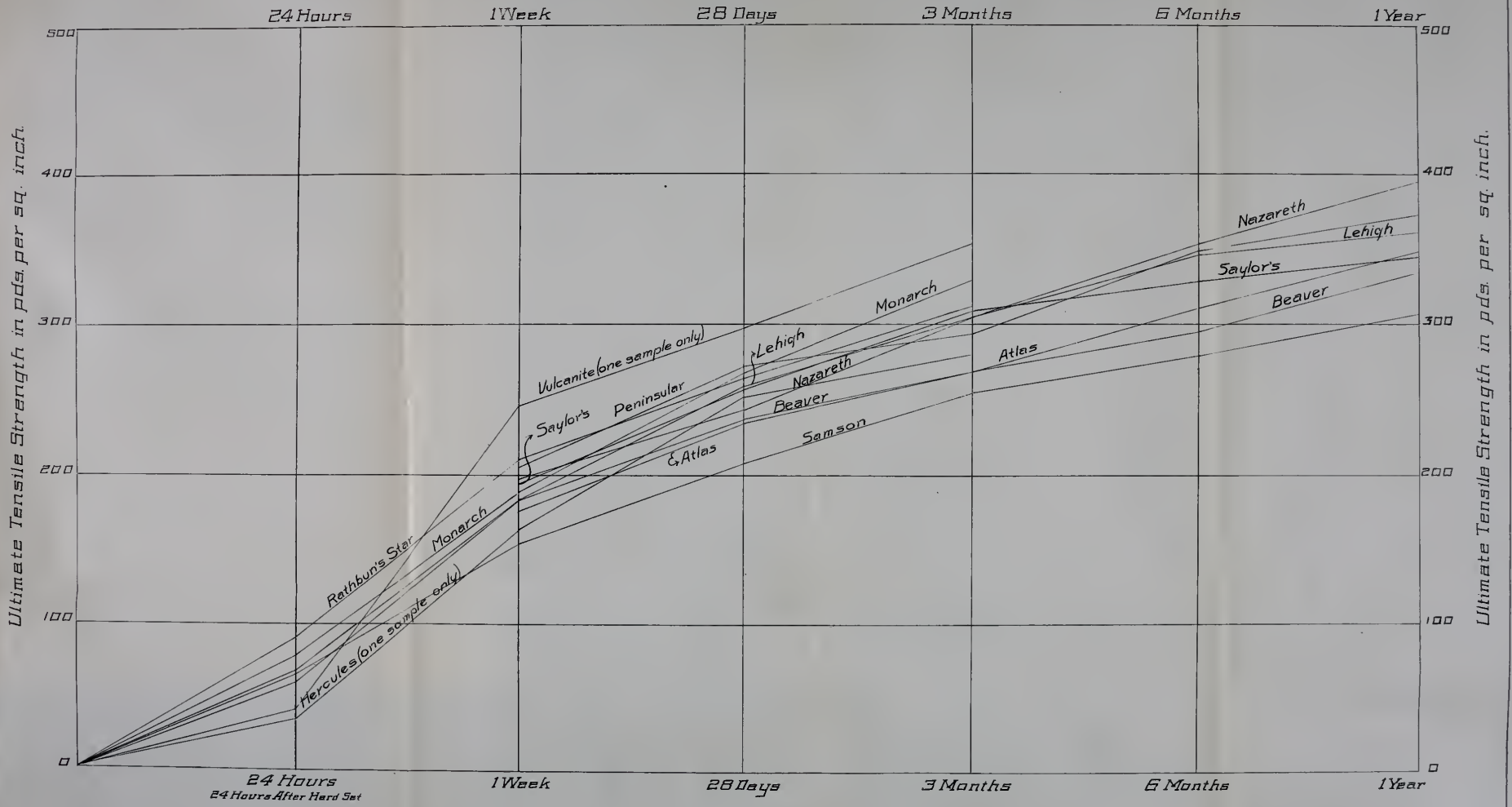
CEMENT SIFTING DIAGRAM
1902.

SPECIFIC GRAVITY DIAGRAM
1902.

City Engineer's Office
Toronto, Feb., 1903.

CEMENT MORTAR 3 TO 1

1902



City Engineer's Office,
Toronto, Feb. 1903.

In addition to the above, 44 private drains were repaired and flushed.

DREDGING SEWAGE DEPOSITS OUT OF SLIPS.

The sewage deposited in the following slips has been dredged out during the year.

Yonge Street sewer outlet.
Church Street slip.
Jarvis Street slip.
Sherbourne Street slip.
Queen's Wharf channel.

A channel was also dredged along the east side of the new piling in front of the Polson Iron Works, in order to provide a greater depth of water at the entrance to the Sherbourne Street slip. The total amount expended for dredging during the year was $7,020.29.

SURVEYS AND SOUNDINGS.

Surveys were made of the Island Shore and the Sand Bar along Ashbridge's Bay. Soundings were taken through Keating's Channel, the Don Channel, Shields' Cut and several other parts of the harbor, and as soon as the ice is of sufficient thickness to ensure safety, it is our intention to make a survey of Toronto Bay, and take a complete set of soundings.

DAY LABOR.

Table No. 2 shows in detail the sewers constructed by day labor during the year and also their actual cost. It will be seen by reference to this table, that in the six cases where we have an opportunity of comparing the actual cost with the next lowest contractor's tender, the gain in favor of day labor is $1,569.73.

Table No. 1 shows all the sewers constructed during the year.

Yours respectfully,
W. A. CLEMENT,
Assistant Engineer.

TABLE No. 1.

SHOWING SEWERS CONSTRUCTED DURING THE YEAR 1902.

Street.	From	To.	Size	Descript'n	Length in feet.	No. Manholes.	No. Gullies.	No. P. D. Connect'ns	Average Depth.	Nature of soil.	Inspector or Foreman.	Contractor.
									ft. in.			
Strachan Ave..	Central Prison sewer	350 ft. south...	9 in.	Tile pipe	350	1	..	1	9 8	soft clay ..	G. R. Carrette	Day labor
Cattle Market .	Wellington Ave	a pt. 600 ft. s.	15 "	"	600	3	..	20	11 10	clay	"	"
Duncan	King	Adelaide	12 "	"	440	3	4	20	12 6	"	R. Patterson	"
Rosedale Rd...	Cluny Ave.....	Crescent Rd. ..	12 "	"	252	1	2	10	12 3	"	"	"
Sheridan Ave..	106 ft. north of Dundas	Moutray	9 "	"	411	1	..	19	10 6	sand.....	"	"
"	College	"	12 "	"	253	1	1	16	10 10	"	"	"
Beatrice	"	a pt. 422 ft. n.	15 "	"	470	2	2	22	11 2	hard clay .	"	"
Golden Ave ...	a pt. 440 ft. n. of Dundas	Railway fence .	12 "	"	210	1	2	16	8 1	sand.....	"	"
Gerrard	Jones Ave.....	Leslie	12 "	"	689	3	4	50	12 0	soft clay ..	Wm. Hill ..	E. Axworthy
McPherson Ave	Yonge	a pt. 426 ft. e. .	15 "	"	480	2	..	30	13 11	clay	R. Patterson	Day labor
Barton Ave....	Howland Ave .	Albany Av. ..	12 "	"	334	2	2	5	11 9	hard clay..	"	"
Pendrith.....	Christie	a pt. 475 ft. w.	12 "	"	500	3	2	29	11 10	hard clay & quick sand	G. R. Carrette	"
Gladstone Ave.	a pt. 540 ft. n. of Dundas	a pt. 310 ft. further north	12 "	"	310	2	2	21	11 11	sand.....	R. Patterson	"
Wallace Ave ..	Manhole opp. Emerson Av.	180 ft. east....	24 "	Circular Brick.	180	1	..	..	8 0	clay	Wm. Douglas	"

TABLE No. 2.

SHOWING COST OF SEWERS CONSTRUCTED BY DAY LABOR DURING THE YEAR 1902.

Street.	From.	To.	Size	Description.	Length in feet.	City's Tender.	Next lowest tender.	Amount to be deducted from tender on account of work not car'd out.	Total cost of work exclusive of interest on money	Difference betw'n actual cost and lowest contractor's tender.	
										Loss.	Gain.
Strachan Ave .	Central Prison Sewer	350 feet south.	9 in.	Tile pipe	350	No tender.	No tender.	.....	$275 30	.....	.....
Cattle Market .	Wellington Ave	a pt. 600 ft. s..	15 "	"	600	"	"	.....	808 11	.....	.....
Duncan	King	Adelaide	12 "	"	440	"	"	.....	766 81	.....	.....
Rosedale Rd ..	Cluny Ave	Crescent Rd. .	12 "	"	252	$543 00	$597 00	$98 50	326 32	.....	$172 18
Sheridan Ave..	106 ft. north of Dundas	Moutray	9 "	"	411	491 00	750 00	62 55	340 16	.....	347 29
" ..	College	"	12 "	"	253	326 00	459 00	32 00	248 46	.....	178 54
Beatrice	"	a pt. 422 ft. n.	15 "	"	470	900 00	1,300 00	.....	810 32	.....	489 68
Golden Ave. ..	a pt. 440 ft. n. of Dundas	Railway fence.	12 "	"	210	290 00	338 00	.....	195 35	.....	142 65
Macpherson Av	Yonge	a pt. 426 ft. e.	15 "	"	480	No tender.	No tender.	.....	928 96	.....	.....
Barton Ave ..	Howland Ave..	Albany Ave...	12 "	"	334	600 00	"	.....	574 67	.....	.....
Pendrith.....	Christie.....	a pt. 475 ft. w.	12 "	"	500	1,100 00	"	133 00	884 78	.....	.....
Gladstone Ave.	a pt. 540 ft. n. of Dundas	a pt. 310 ft. further north	12 "	"	310	560 00	680 00	.....	440 61	.....	239 39
Wallace Ave ..	Manhole opp. Emerson Ave.	180 ft. east....	24 "	Circular Brick.	180	No tender.	No tender.	.....	528 64	.....	.....
											$1,569 73

BRIDGE MAINTENANCE AND REPAIRS.

CITY ENGINEER'S OFFICE,
Toronto, December 31st, 1902.

MR. C. H. RUST,
City Engineer.

DEAR SIR,—The following is a report of work done under the above heading during 1902:

GERRARD STREET BRIDGE.—Some slight repairs were made to the deck and sidewalks, necessitated by the laying of a new water-main under the sidewalk on the south side of the bridge.

WINCHESTER STREET BRIDGE.—In the early part of the year it was found necessary to remove some members of the main trusses, which were much decayed. New ones were inserted, but as little as possible was done, only sufficient to make all safe. About September, however, the entire deck was removed, other portions of the decayed trusses replaced or strengthened and a new deck put on. Some extra strengthening of the needle beams will be required during the coming season; the hand-railing and adjoining fences were also repaired.

LAKE SHORE ROAD CULVERTS.—The three culverts on this road were examined and repaired where necessary, chiefly the upper course of planking.

LAMB'S DRAW BRIDGE.—Frequent repairs have had to be made to this bridge, and the working parts adjusted, as the heavy traffic which it sustains frequently cripples it. I have prepared drawings in detail for changing it into a swing bridge during the coming season. If this is done, the bridge will be useful for some years to come.

CHERRY STREET BRIDGE.—The gear of this swing bridge requires frequent adjustment on account of the slight alteration in level of the centre pier by the winter frosts. This has been done and also sundry repairs made to deck planking.

GLEN ROAD BRIDGE.—The roadway and sikewalk planks have been renewed where necessary, and a picket fence built at the north end from the bridge hand-railing around the corner of Dale Avenue, to the limit of the City property. This bridge is badly in need of painting.

JOHN STREET BRIDGE.—At the junction of the bridge planking proper and south ramp, new timbers and planking have been put in to make a proper connection.

HUNTLEY STREET BRIDGE.—Some repairs were made to the deck and sidewalk planking. The roadway planks are much worn, and will require attention again early in the coming season.

SHERBOURNE STREET BRIDGE.—The deck planking on this bridge is worn very thin, so that it could only be repaired with 1½-inch boards, otherwise it would be unsightly. This deck will require entire renewal during the coming season. The sidewalk was also repaired in many places. The bridge is very much rusted in parts and requires painting.

DUNDAS STREET BRIDGES.—The roadway portion of these bridges has been entirely renewed, both as to stringers and planking. Many of the stringers were so decayed at the supporting ends that the steel rails were holding them up and carrying the load alone. The gutter board is in a very decayed state, but was left over until another season. Some slight repairs were done to the sidewalk planking. This bridge is very much in need of painting.

ISLAND PARK BRIDGES (Clandeboye Avenue).—This bridge was raised considerably during the winter by ice, which damaged the superstructure considerably. This was temporarily repaired and made safe; but I recommend that during the coming season small cribs be constructed to support the centre span instead of the present piles.

The deck of the Hallam Bridge requires considerable repairs and the ironwork should be painted. I have prepared a drawing of a scheme for reducing the grades on this bridge, which, if funds are provided, can be done during the coming season.

RIVERDALE PARK BRIDGE.—New turned posts, with iron bolts running through them, have been placed at each end of this bridge to prevent vehicles using it for crossing the river at this point. Many of the members show signs of decay and will have to be renewed in the near future.

CATTLE MARKET BRIDGE.—This bridge deck has been looked after and repaired by the City Commissioner, but the steel work in the bridge and supports is in a deplorable state of rust, and should be scraped and painted.

Crawford Street Bridge.—The entire deck, both roadways and sidewalks, has been renewed, new stringers and corbels put in and the hand-railing repaired, raised and newly capped throughout.

Dupont Street Culvert.—The entire superstructure of this culvert has been renewed, strengthened and extended so as to accommodate the rails and traffic of the Street Railway which will soon run over it. New sidewalks and hand-railing have been laid the full width of new street.

King Street Subway.—About one-half of the north wall at the west end has been thoroughly drained by taking out the earth from behind it, to a depth below the level of the present sidewalk, and putting in some brickbats and broken stone, with a 6-inch tile drain at the bottom, connected with cast-iron pipes through the walls to the sewer. The existing surface drains on this portion of the Subway have been opened and protected, so that surface rubbish cannot get into them.

St. Lawrence Market.—Drawings and specifications for 26 butcher stalls with all details of same, and drawings and specifications of gas installation to the whole south market, have been made, and the erection, painting and finishing of these butcher stalls has been superintended. Careful reports were also made on the whole system of heating the market.

Reports were also made on the heating apparatus of the Court Street Police Station.

Respectfully submitted,

JOHN WILLIAMS,
Assistant Engineer.

LIST OF STEEL AND IRON BRIDGES.

The following List gives Particulars of all the Bridges Built by or under the Control of the Department.

Bridge.	When built.	Class.	Foundation.	Total length.	No. of Spans.	Span.	Width of Roadway.	Sidewalk		Deck to Grade or Water.
								No.	Width	
				ft. in.		ft. in.	ft. in.		ft. in.	ft. in.
Queen Street east over Don —(rebuilt)	1900..	Steel through bridge .	Stone masonry ..	167 6	1	.....	125 0	42 0	2 10 0	15 0
Eastern Avenue over Don —(rebuilt)	1900..	" " " ..	Concrete " ..	140 0	1	.....	134 0	21 0	1 6 6	14 0
Glen Road over Rosedale ravine — (altered and strengthened)	1877.. 1899	Steel trestle deck bridge	Stone " ..	393 0	11	.....	33 0	16 10	2 4 6	68 0
Huntley Street over Rosedale ravine	1884..	Steel trestle deck bridge	" " ..	439 0	13	7 @ 32 0 6 @ 30 0 Abuts 25 0	17 6	2	6 0	60 0
Gerrard Street over Don River	1889..	Steel through and deck bridge	" " ..	420 0	13	1 @ 120 0 2 @ 23 0 4 @ 26 0 6 @ 25 0	27 0 and 32 0	2	6 6	33 0 and 25 0
Sherbourne Street over Rosedale ravine	1890..	Steel trestle deck bridge	" " ..	493 0	15	12 @ 30 0 2 @ 20 0 1 @ 42 0	30 0	2	6 0	78 0
* Carlaw Avenue	1890..	Plate girder carrying G. T. Ry.	" " ..	74 0	1	..... 68 0	..	..	None	18 0
Dundas Street over G.T.R. and C.P.R.	1893.	Steel through bridge .	" " ..	346 8	4	1 @ 104 2 1 @ 93 0 1 @ 62 0 1 @ 80 6	30 0	2	7 0	26 0
Dundas Street over G.T.R. (Northern)	1893..	" " "	" " ..	90 0	1	..... 83 0	30 0	2	7 0	26 0
Cherry Street over Don River	1897.	Steel swing bridge ...	Cribbing & piling	126 0	1	..... 120 0	15 0	..	None	8 6
Cattle Market	1893..	Steel lattice through bridge	Stone masonry ..	160 0	2	1 @ 100 0 1 @ 60 0	16 0	1	4 0	25 0
Humber, over Humber River (rebuilt)	1900..	Steel through bridge..	Concrete " ..	165 0	1	..... 160 0	21 6	1	6 6	15 0
Island Park	1893..	Steel and cast iron arch bridge	Stone " ..	150 0	3	1 @ 60 0 2 @ 30 0	22 0	..	None	14 3
† York Street	1897..	Steel deck bridge	" " ..	1193 0	32	..... 13 2 .... to 70 0	37 6	2	7 6	29 6
‡ John Street	1897..	Steel through bridge .	" " ..	738 0	6	2 @ 100 0 2 @ 140 0 1 @ 150 0 1 @ 108 0	30 0	2	6 6	25 6
§ King Street Subway....	1889..	Steel deck bridge....	" " ..	740 0	.	2 @ 33 0	Railway		tracks	19 0
§ Queen Street subway ..	1897-8	Plate girder bridges..	" " .	270 0	..	3 @ 87 6	Railway		tracks	17 6

* Constructed by City. G.T.R. maintains, charging same to City.

† Constructed by C.P.R., City paying half the cost of construction and maintenance.

‡ Southern portion constructed by C.P.R., northern portion by G.T.R., Railways to maintain.

§ Constructed by City, Railways maintain superstructures, City maintains substructures.

LIST OF WOODEN BRIDGES.

Bridge.	When built.	Class.	Foundation.	Total length.	No. of spans.	Span.	Width of Roadway.	Sidewalk.		Deck to gr'nd or water.
								No.	Width.	
				ft. in.		ft. in.	ft. in.		ft. in.	ft. in.
Arthur Street.—(filled in).	1897–8	.....	.....	.....	....	.....	.....	..	....	....
Crawford Street	1884..	Wood trestle	Wooden posts ...	308 0	14	..... 22 0	19 0	2	4 6	31 6
Shaw Street, near Arthur —(filled in).	1896–7	....	.....	.....	....	....	.....	..	.....	....
Shaw Street, near College.	1885..	Wood trestle	Wooden posts ...	354 0	16	14 @ 22 0 1 @ 26 0 1 @ 20 0	19 10	2	4 6	31 6
Humber Bridge—(re-built in steel).	1900	... .	.....	.....	....	....	.....	..	.....	....
Strachan Avenue, over G.T.R. — (partially re-built)	1878.. 1901	Queen truss wood...	Wooden bents .	121 0	7	1 @ 7 0 1 @ 16 0 1 @ 26 0 1 @ 30 0 1 @ 12 0 2 @ 11 0	19 0	2	7 0	20 6
Strachan Avenue, over C.P.R. — (partially re-built)	1878 1901	Queen truss wood....	Wooden bents...	121 0	7	2 @ 7 0 2 @ 16 0 2 @ 19 0 1 @ 30 0	19 0	2	7 0	19 0
Eastern Avenue— (re-built in steel)	1900	.....	....	.....	....	....	.....	..	. . .	....
Winchester Street	.. .	Queen truss wood....	Cribbing & piling	158 0	3	1 @ 54 0 2 @ 52 0	18 0	1	5 6	17 7
Binscarth Avenue	1894..	Deck bridge wood....	Wooden bents ..	61 0	3	2 @ 23 0 1 @ 15 0	16 8	..	None.	20 0
Castle Frank	1896..	Deck bridge wood....	Wooden bents...	173 4	11	1 @ 28 1 3 @ 16 1 1 @ 16 6 1 @ 20 6 2 @ 14 6 2 @ 10 0 1 @ 11 0	17 0	1	3 6	14 6
Riverdale Park	1896..	Through truss bridge wood.	Piling	129 0	1	..... 125 0	8 0	..	None.	14 1
Haulan's Point to Turner's Baths.	1885..	Queen truss wood....	Cribbing	560 0	13	..... 40 0 ..... to 45 0	8 0	..	None.	5 6
Clandeboye Avenue, Island Park.	1900 .	Through deck bridge .	Cribbing & piling	80 0	3	2 @ 25 0 1 @ 30 0	6 0	..	None.	7 0

BRIDGE MAINTENANCE AND REPAIRS.

DETAILS OF COST DURING 1902.

Name of Bridge.	Nails, etc.	Tools.	Paint.	Sundries.	Lumber.	Labor.	Total.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Gerrard St. Bridge..	18 70	.. ..	.....	.....	8 05	16 00	42 75
Winchester St. " ..	41 98	54	12 00	10 38	747 41	528 27	1,340 58
Lake Shore Rd. culv't	.....	....	.....	.....	24 90	23 89	48 79
Lamb's Draw Bridge.	.....	75	.....	15 55	50 00	158 47	224 77
Cherry St. " .	.....	....	.....	.....	3 85	141 70	145 55
Glen Road " .	.....	3 65	....	75	75 76	81 00	161 14
John St. " .	.....	....	.....	.....	.....	22 45	22 45
Huntley St. " .	5 66	2 04	.....	2 75	47 20	70 78	128 43
Sherbourne St. " .	5 95	2 75	.. .	....	82 80	97 16	188 66
Dupont St. Culvert ..	5 50	5 25	7 00	12 25	207 40	205 45	442 85
Dundas St. Bridge.	96 46	.....	.....	11 42	1,577 52	1,319 98	3,005 38
Island Park " .	.....	.....	.....	5 00	.....	9 90	14 90
King St. Subway	2 00	55 75	.....	10 60	215 81	1,483 30	1,767 46
Riverdale Park Bridge	.....	3 00	.....	.....	.....	7 00	10 00
Crawford St. "	57 48	.....	.....	15 70	1,625 96	819 55	2,518 69
	233 73	73 71	19 00	84 40	4,666 66	4,984 90	10,062 40

REPORT OF STREET COMMISSIONER

STREET COMMISSIONER'S OFFICE,
Toronto, December 31, 1902.

MR. C. H. RUST,
City Engineer.

DEAR SIR—Pursuant to custom I beg to submit herewith a report of the works and services carried out under my supervision for the year ending December 31, 1902.

ROADWAYS.

MACADAM.—The maintenance of roadways and pavements of this class has been done to the best advantage with the funds available. The expenditure under this head was $3,742.17. This amount is exclusive of repairs to macadam roadways constructed as local improvements, a special fund having been appropriated for the maintenance of this class of road.

LOCAL IMPROVEMENT MACADAM REPAIRS.—Roadways of this class were repaired as under.

Street.	From	To	Square Yards.	Cost.	Cost per square yard.
				$ c.	cts.
West Market	King	Front	1,067	188 65	18
Oak	Parliament	Sackville	933	97 13	9½
First	Broadview	Logan	2,664	487 14	18
Jarvis	King	Queen	2,622	774 77	29½
Eastern	Don Bridge	G. T. R.	2,609	394 49	19
Parliament	Queen	Gerrard	5,689	916 08	16
Strachan	King	The Bridge	2,227	399 70	17
Crescent	Yonge	900 feet east	1,400	208 52	15
Elm	Yonge	University	2,306	500 46	22
*Yonge	C. P. R.	North City limit.	6,000	1,110 05	19

* The money for this work was specially appropriated in accordance with an agreement between the City and the County authorities.

The expenditure under this head was $6,817.63.

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Cost.

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89	77
9	50
8	21
37	88
10	08
7	22
12	69
9	60
40	63
19	38
5	98
01	88
10	19
115	11
69	43
20	69
35	87
77	63
64	71
46	41

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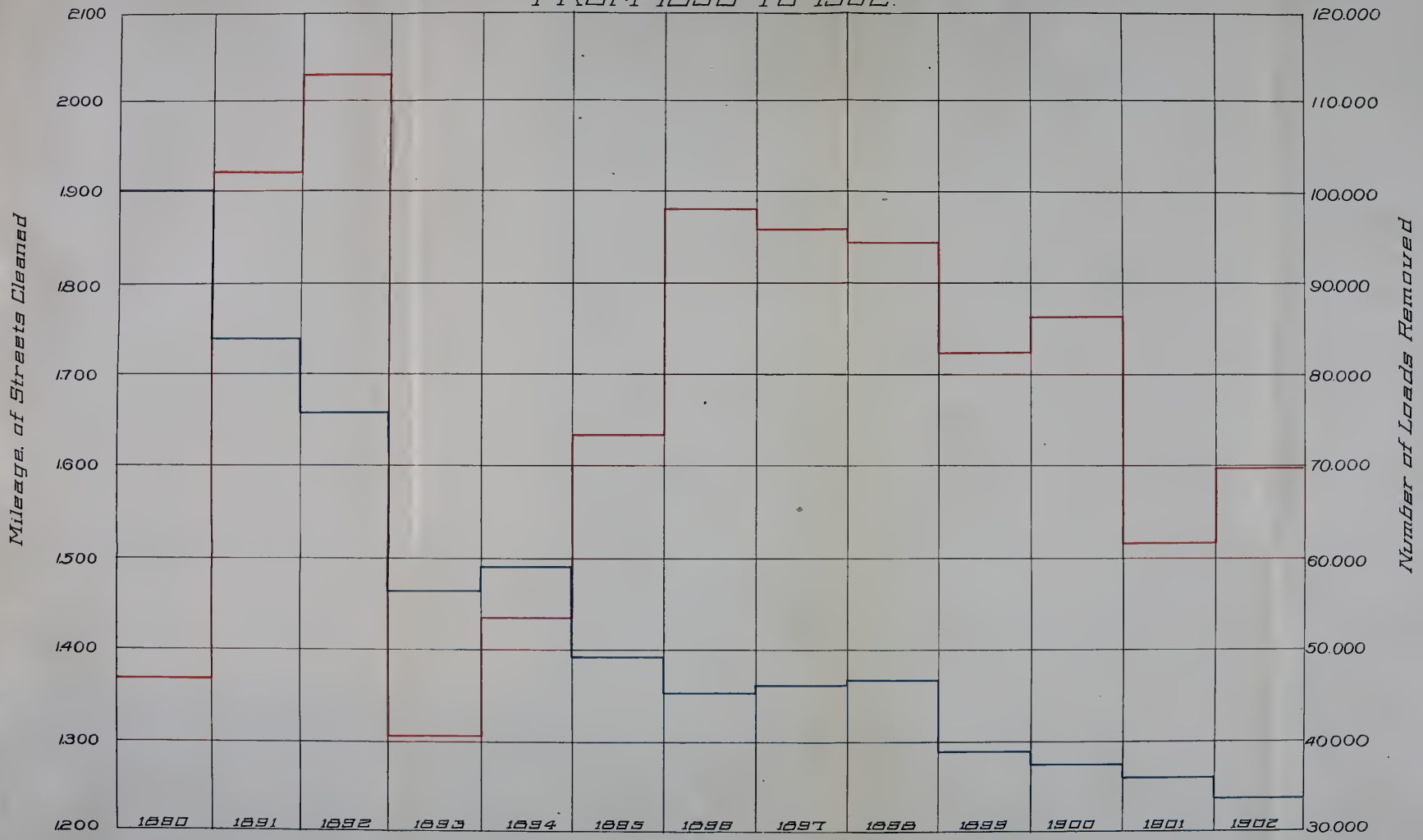
DIAGRAM SHEWING MILEAGE OF STREETS CLEANED AND NUMBER OF LOADS OF SWEEPINGS REMOVED FROM 1890 TO 1902.



Mileage of Streets Cleaned shewn thus ——

Number of loads removed " " ——

City Engineer's Office, March 31/03

The undermentioned streets have been patched and repaired as the foregoing.

Street.	From	To	Cost.
			$ c.
Spadina	The Bridge	Foot of Hill	89 77
Pembroke	Shuter	Wilton	9 50
Isabella	Sherbourne	Jarvis	8 21
Wellesley	Jarvis	Sherbourne	37 88
Shuter	Jarvis	Sherbourne	10 08
Sackville	Winchester	Wellesley	7 22
Crescent Rd	Scarth	South Drive	12 69
Scarth	South Drive	Crescent	9 69
South Drive	Huntley	Glen	40 63
Wellesley	Parliament	Sumach	19 38
Sackville	Wellesley	North end	5 98
Front	George	Trinity	101 88
Anderson	McCaul	Simcoe	110 19
Wellington	Bathurst	Niagara	115 11
Macpherson	Yonge	1,333 feet west	69 43
Sheppard	Adelaide	Richmond	20 69
Grosvenor	Yonge	Queen's Park	35 87
Elm	Yonge (second repair)	University	77 63
Shuter	Yonge	Jarvis	64 71
Bismarck	Yonge	Park Road	46 41

Gravel Roads—The repairs to gravel roads throughout the City have been as under. The funds expended for this purpose were $1,097.19. I would point out in connection with this class of pavement that the lifetime of the gravel road as recommended by the City Engineer was for three years. These pavements have now been maintained for five years, and I would suggest that some policy be determined upon for their maintenance in future. It is unreasonable, I think, for the property owners to expect the City to maintain these roadways for a longer period than the lifetime, as recommended by the City Engineer.

Street.	From	To	Cost.
			$ c.
Afton	Northcote	Lisgar	62 87
Brock	Queen	C. P. R. tracks	114 68
Dovercourt	Dundas	Foxley	89 94
O'Hara	100 ft. north of Queen	Maple Grove	58 54
Melbourne	Dufferin	Cowan	69 60
North Beaconsfield	Dundas	Afton	83 59
Lansdowne	Queen	Marion	98 29
Lansdowne	Union	400 feet south	
Lisgar	Queen	Argyle	75 49
Lisgar	Dundas	Afton	84 16
Dufferin	G. T. R. tracks	400 feet south	77 29
Peel	Gladstone	Dufferin	37 04

Special Road Repairs—As a local improvement, Beatrice Street from College Street north for a distance of 422 feet was graded at a cost of $529.05. About 1,500 cubic yards of earth were removed to ravine east of street line.

General Road Repairs.—The expenditure under this head is for grading unimproved roads, particularly between the time they are sewered and paved. A large number of streets have been trimmed up with graders, which has materially improved their appearance and usefulness. The amount expended was $1,558.88.

Roadway—Cedar Block.—All cedar block pavements that have been constructed in recent years, the lifetime of which has not expired, have been gone over and repairs made fitting with the amount of money at the disposal of the Department for this class of repairs. There are a number of block pavements throughout the City the lifetime of which has expired; these should be renewed. The expenditure upon this work was $1,442.84. The expenditure on tool a/c was $1,921.99. This was for repairs to rollers, crushers, tools, etc.

Roadway—Stone—The expenditure under this head was $579.75. The stone pavements are few in number, and are not of very good quality, as they require attention every spring.

SIDEWALKS.

The mileage of plank walks constructed this year, I am glad to say, is much less than previous years, due to the constantly increasing preference on the part of property owners for cement walks.

I am preparing and will submit a list of the walks that should be renewed. This list I have divided into two classes: walks that should be constructed with cement, and those where wooden walks should be constructed. I have carefully compiled this list, having special regard to the local requirements, and the ability of the property owners to pay for the construction of these walks.

The funds appropriated for the repairing of wooden sidewalks seem to grow less as the walks grow worse. A few years ago $25,000 was appropriated for the maintenance of these walks. The amount appropriated in 1902 was altogether inadequate for the very large mileage of walks that I have to maintain. As you are aware, labor has increased in price, as also has material, so that I have been forced to do less repairs for the last two or three years. The amount of money spent on sidewalk repairs during 1902 was $8,185.41.

Sidewalk Extensions—Extensions and short sections of plank sidewalks have produced a revenue of $915.12.

There has also been received on miscellaneous accounts, amounts paid to the City Treasurer, totaling $1,703.97.

Permits for the removal of sidewalks have been issued to the number of 22. A deposit was exacted in each case, and retained until the walks were properly restored.

Snow Removed from Sidewalks.—For the winter of 1901-1902, 312 lineal miles of sidewalks were cleaned at a cost of 4 mills per lineal foot for each cleaning, made up as follows:

Ward.	Miles.	Feet.	Cost.
			$ c.
1	51	982	1,081 14
2	18	3,526	394 43
3	10	3,996	227 37
4	35	106	739 64
5	84	58	1,773 38
6	112	3,648	2,380 30
	312	1,756	6,596 26

GULLEY CLEANING.

The expenditure under this head was $4,908.48. All the gulleys were cleaned to the best possible advantage, but on account of the extraordinarily wet season the number of cleanings were somewhat lessened, which will necessitate an extra cleaning during the coming season.

STREET CLEANING.

The mileage of streets cleaned during 1902 was 1,597, necessitating the removal of 33,482 loads of scrapings and sweepings. This included the cleaning of asphalt pavements by the rotary brooms until the patrol men were put in charge of these pavements. The total expenditure, including patrol cleaning, removal of snow and ice, etc., was $72,057.15. These figures are made up of three branches, viz.:

1. Street cleaning, including cleaning of crossings, maintenance of plant, etc., $39,389.19.

2. Snow and ice removal, which includes the removal of snow and ice from bridges and crossings: the City's share ($\frac{2}{3}$ of total cost) of the removal of snow from the streets whereon the tracks of the Toronto Railway Company are laid (under agreement) $10,699.14.

3. Asphalt patrol cleaning, from May 4 to November 30, $21,968.82

I have secured a statement of the cost of street cleaning in a large number of American cities for the year 1900, and I have placed side by side with this our own expenditure and other data for that year, and also the figures for 1902 in three different ways.

NOTE.—The following explains the alphabetical letters appearing in the list referred to:

Year 1900—"A" designates the total mileage of paved streets, including asphalt ($17,087.07), snow removal ($14,294.04), and street cleaning proper ($37,249.34). 29c. per capita.

"B" designates the total mileage of paved streets, exclusive of asphalt expenditure. 21c. per capita.

"C" designates the mileage of paved streets, exclusive of asphalt and snow expenditure. 16c. per capita.

Year 1902—"D," "E" and "F" apply in the same order as the three letters above preceding.

The following statement shows the cost per capita and also per mile:

The average cost per capita (48 cities) was 37 cents.
The average cost per mile (48 cities) was about $1,085.

While the figures for Toronto are:

1900—"A," 29 cents. "B" 21 cents. "C," 16 cents.
Cost per mile, $377.

1902—"D," 27 cents. "E," 19 cents. "F," 15 cents.
Cost per mile, $395.

City.	Population.	Expended in Street Cleaning.	Cost per Capita.	Miles of Paved Streets	Cost per Mile
		$	$ c.		$
Albany, N.Y.	94,151	42,402	0 45	80.92	524
Allegheny, Pa.	129,896	45,000	35	84.04	535
Atlanta, Ga.	89,872	.....	.....	63.00	.....
Bridgeport, Conn.	70,996	23,917	34	4.75	5,035
Cambridge, Mass.	91,886	30,000	33	6.00	5,000
Camden, N.J.	75,935	25,000	33	4.90	510
Columbus, Ohio.	125,560	55,000	44	117.41	469
Dayton, Ohio	85,333	19,683	23	31.17	631
Denver, Col.	133,859	40,000	29	26.00	1,538
Des Moines, Ia.	62,139	14,549	24	61.00	238
Detroit, Mich.	285,704	128,760	45	298.00	432
Fall River, Mass.	104,863	30,000	29	76.00	857
Grand Rapids, Mich.	87,565	42,000	48	144.00	292
Hartford, Conn.	79,850	62,823	78	85.13	710
Indianapolis, Ind.	169,164	47,000	28	86.00	547
Jersey City, N.J.	206,433	71,000	34	130.00	546
Kansas City, Mo.	163,752	82,000	50	180.00	455
Lawrence, Mass.	62,559	.....	.....	2.25	.....
Los Angeles, Cal.	102,479	88,223	86	24.30	.....
Louisville, Ky.	204,371	109,000	53	167.00	653
Lowell, Mass.	94,969	28,000	29	18.25	1,534
Lynn, Mass.	68,513	5,000	7	4.00	1,250
Memphis, Tenn.	102,320	20,000	20	85.00	235
Milwaukee, Wis.	285,315	106,580	37	110.80	962
Minneapolis, Minn.	202,718	41,513	20	103.11	403
Nashville, Tenn.	80,865	32,700	40	5.98	5,485
Newark, N.J.	246,070	85,000	35	119.00	714
New Bedford, Mass.	62,442	14,927	24	20.00	746
New Haven, Conn.	108,027	43,250	40	46.97	921
New Orleans, La.	287,104	120,303	42	205.76	584
Oakland, Cal.	66,960	18,250	27	115.00	159
Omaha, Neb.	102,555	22,000	21	85.21	258
Paterson, N.J.	105,171	30,000	29	60.00	500
Portland, Ore.	90,426	38,595	43	234.30	165
Providence, R.I.	175,595	60,310	34	31.89	1,891

City.	Population.	Expended in Street Cleaning.	Cost per Capita.	Miles of Paved Streets	Cost per Mile
		$	$ c.		$
Reading, Pa	78,061	15,000	19	12.00	1,250
Richmond, Va	85,050	60,004	71	28.00	2,143
Rochester, N.Y	162,608	58,365	36	125.00	467
Scranton, Pa	102,026	12,629	12	20.25	623
Somerville, Mass	61,643	9,300	15	3.50	2,657
Springfield, Mass	62,059	24,912	40	45.90	543
St. Joseph, Mo	102,979	12,000	12	25.00	480
Seattle, Wash	80,671	10,074	12	14.14	712
St. Paul, Minn	163,065	70,000	43	46.00	1,522
Syracuse, N.Y	108,374	79,383	73	37.24	2,132
Toledo, Ohio	131,822	45,405	34	139.70	325
Troy, N.Y	66,651	105,000	1 73	37.26	282
Trenton, N.J	73,307	12,000	16	20.00	600
Washington, D.C	278,718	161,000	58	266.00	605
Wilmington, Del	76,508	15,000	20	54.00	278
Worcester, Mass	118,421	32,000	27	12.00	2,667
A—Toronto, Ont	237,000	68,630	29	181.86	377
B— "		51,543	21	151.05	341
C— "		37,249	16	151.05	246
1902.					
D—Toronto, Ont	267,000	72,057	27	182.48	395
E— "		50,088	19	142.73	351
F— "		39,389	15	142.73	276

ASPHALT CLEANING.

I have reported the expenditure on this service in the preceding account. The increase in the price of labor has materially increased the cost of this service. The uniformed patrol men who have been performing this service during the past year have given very good satisfaction, and with one or two exceptions have kept themselves smart, clean, and generally in a satisfactory condition, which reflects greatly to their credit.

There has been practically no change in the beats from those reported last year, but on account of the increase of asphalt pavements on some of the main thoroughfares, these will have to be rearranged before the men are placed in charge for the coming summer.

STREET CLEANING SNOW.

The expenditure in this service, as quoted before, was $10,699.14. This is practically the service of street cleaning, including the removal of snow from crossings, bridges and street intersections, and the City's

share (2-3 of total cost) of the removal of snow from streets whereon the tracks of the Toronto Railway Company are laid. This is done as per agreement. The total number of loads of snow removed was 46,447, of which 12,061 were team loads; all of which were removed between January 22nd and February 14th, with the exception of one small quantity of 24 loads which were removed just prior to the close of the year.

SCAVENGING.

Expenditure—$81,614.45.

Collections—Ashes, 123,552 loads.
Garbage, 27,568 "
Total, 151,120 "

The above figures in a few words give the report for 1902. The expenditure has increased and will continue to increase until some more convenient dumping grounds are provided for the reception of the collections. The tremendously long hauls that are now necessary to dispose of the collections have called for a larger expenditure than was anticipated when the estimates in the fall of 1901 were prepared. Therefore, the funds available for plant maintenance have been materially shortened on account of the increased cost of labor and haulage. I would urge very strongly that if there is any more ground on the water front that requires to be filled in, now is the time to have it done cheaply and expeditiously. If no City land is available, steps might be taken to induce some private owners to crib their property to the southerly limit of their holdings, on the understanding that the City will provide the necessary filling.

Another matter I might mention is the increased demand on this service by manufacturers, merchants and others for the removal of waste from their manufacturing concerns, including ashes, rubbish, etc. The Committee on Works, being alive to the conditions that are likely to prevail if steps are not taken to readjust the existing evils, have appointed a sub-committee to go into this matter thoroughly with a view of arriving at a satisfactory solution of the difficulty. This sub-committee now meets from time to time, and I hope to be able to report next year a satisfactory solution of the troubles that are now being experienced in collecting waste material,

and also as to the maximum quantity to be removed from each of these establishments.

DESTRUCTORS.

Reconstruction of Western Destructor.—This work is well under way, one furnace having been remodelled and put in satisfactory condition, my own ideas being utilized. This furnace has been thoroughly tested and found to meet the demands made upon it satisfactorily. The second, or south furnace, will be proceeded with immediately, and will be found even more satisfactory than the other; as there are changes I propose to make that will give better results. When this is completed I will then report upon the expenditure together with all plans and details of same.

The cost of maintenance for the destruction of garbage at this destructor was $8,060.39.

Eastern Destructor.—This destructor, I regret to say, is in a bad state and impossible to use. The building has seen its day, and, I am afraid, will collapse in a very heavy wind storm. The iron smoke-stack which has done duty for some considerable time has recently collapsed, and it is now impossible to consume garbage in this destructor. For the time it was in operation the cost of maintenance was $1,711.13.

The following is a statement of the classes and quantity of garbage consumed during 1902:

	Western.	Eastern.
Garbage and refuse	16,678 loads.	6,170 loads.
Dogs	831	448
Cats	1,284	319
Fowls	1,234	733
Fish, fruit, oysters, etc	283 bbls.	3,073 bbls.
Eggs	194 boxes.	870 boxes.
Mattresses	1,680	412
Carcases beef	2	1
Meat	55 boxes.	11 boxes.
Hides	1	9
Potatoes	..	236 bags.
Goats	2	4
Cabbage	..	55 crates
Rabbits	..	778
Butter	..	7 bbls.

STREET WATERING.

Three trolley sprinklers have been in operation as usual, in addition to the regular waggon service. The mileage covered by these sprinklers, for which the Railway Company has been paid, was 17,144.7 @ 16¼ cents = $2,785.91.

The details of this service are as follows:

No. 1 SPRINKLER (2,500 gallons capacity) commenced March 26; was taken off September 23. 3,499 loads were consumed, which required 8,787,200 gallons of water. The mileage traversed was 6,055.88.

No. 2 SPRINKLER (2,800 gallons capacity) commenced April 3; was taken off October 11. 3,339 loads were consumed, which required 9,349,200 gallons of water. The mileage traversed was 5,867.65.

No. 3 SPRINKLER (2,800 gallons capacity) commenced April 22; was taken off September 24. 3,121 loads were consumed, which required 8,738,800 gallons of water. The mileage traversed was 5,221.19.

The mileage of Sunday sprinkling, which is included in the above, is 695.28.

I have recommended that the Railway Company put a fourth sprinkler, with a greater capacity, on during the coming season. This will permit of a re-arrangement of the routes that are now traversed by the three sprinklers, so as to give even a better service than has been rendered heretofore.

The waggons—the ordinary street watering service distributed 31,492,000 gallons of water during the season. This amount, together with that used on the trolley service, totals 58,367,200 gallons of water.

Total number of loads—Trolley..	9,959	water,	26,875,200 gallons.
" " —Waggons	62,983	water,	31,492,000 gallons.
Grand total.....	72,942		58,367,200 "

CROSSINGS AND CURBS.

The funds appropriated for stone and wooden crossing repairs have been expended to the best possible advantage. I would respectfully urge, however, that a great deal larger amount be appro-

priated for the construction and maintenance of stone and wooden crossings, and also for stone and wooden curb repairs, There was expended on the former, viz., stone and wooden crossings, $1,428.25, and for stone and wooden curb repairs, $419.21.

WEED CUTTING.

This service would, if properly performed, entail an expenditure of four or five thousand dollars. The funds appropriated are altogether too small to properly carry out the performance of this service. Last fall the Department was in receipt of a large number of complaints about the growth of weeds on the street allowances. This state of affairs, on account of no funds being available, I was unable to remedy. The money expended on this service was $591.13.

HOUSE OF INDUSTRY STONE.

There was broken by the inmates of this institution for the year 1902, 54.89 toise of stone. The arrangement with the institution is that the stone is to be delivered on the premises, and is broken by the inmates without further cost to the City other than measuring, etc.

STREET NUMBERING.

The time has arrived when the main portion of the City, particularly the business streets, should be renumbered. Steps along this line should be taken this coming season to determine the class of numbers and street tablets that should be adopted. The adoption of an official number and street tablet would materially assist the Department in this service. The expenditure under this head was $281.65.

ISLAND SERVICES.

Scavenging.—This service was commenced on May 7 and discontinued on October 4. The number of team loads of refuse collected was 400, entailing an expenditure of $547.84.

Crematory.—A crematory having been ordered by the Council, was erected on the Island, just north of the Pumping Station, on the west side of the Water Works cut. This has been in operation the best part of the season, and has proved a valuable accessory to the scavenging service at the Island in abolishing the former crude and insanitary method of disposing of refuse by burying it. All garbage and night soil collected since the destructor began

operations have been consumed therein. The cost of the destructor was $2,276.37, and maintenance, including fuel, labor, etc., $286.57.

The Council appropriated a small sum for grading and trimming the streets at the Island. On this service was expended $113.01. This work has been very much appreciated by the residents at the Island, and has given a trim and tidy appearance to the streets.

Bicycle Path.—I propose to include in the Estimates for 1903 an item for repairs to the wooden bicycle path which extends from Hanlan's Point to the Eastern Breakwater. This path, as you are aware, was constructed in 1898. By the action of the wind, the sand forming the foundation is constantly shifting, and considerable repairs will be necessary to put it in proper order.

Island Breakwater.—The Dominion Government have continued the planking of the breakwater from where we left off some time ago to the Eastern Channel. This has been constructed three feet wide, and while it is not as convenient as if entirely planked, it is a great improvement on the conditions that have prevailed heretofore.

STOCK.

The Department has carefully compiled lists of all plant, material and stock on hand, together with description, including buildings, etc., to December 31, 1902. This you have already received, and as it is altogether too voluminous to print in this report, I refer you to it for any information required. The total value of the stock was $84,237.99.

Yours truly,

JOHN JONES,

Street Commissioner.

LIST OF PLANK SIDEWALKS CONSTRUCTED BY STREET COMMISSIONER'S DEPARTMENT AS LOCAL IMPROVEMENTS DURING 1902.

District No. 1.

Street.	Side.	From	To	Width (feet)	Length (feet)	Lumber (feet).	Nails (lbs.)	Total Cost.
								$
Booth	E	Eastern	Pt. 1110 ft. s.	6	1,122	17,968	500	409 22
Brighton	S	Pape	East end	6	310	5,048	150	114 15
Caroline	W	Queen	Eastern	5⅓	966	14,154	500	330 66
Clarke	S	Bolton	Grant	4	441½	4,749	150	118 30
Cumming	S	Bolton	DeGrassi	4	205	2,224	73	60 11
Coxwell	W	Queen	Pt. 200 ft. n.	4	200	2,150	50	59 09
Eastern	S	Morse	Carlaw	4	297	3,216	100	199 93
				Curbing...		987		
				Spikes....		.....	25	
				Posts, ¾ cord.				
Elliott	S	Broadview	Munro	4	394	4,224	125	108 40
"	N	"	"	4	396	4,736	125	121 70
		(Not laid opp	osite house No. 10,—	12 f	eet).			
Gildersle've	N	Sumach	Pt. 402 ft. e.	4	405	4,325	125	108 31
Hamilton	W	Paul	Gerrard	4	1,811	19,808	500	461 69
Logan	E	Eastern	Pt. 954 ft. s.	5⅓	960	14,064	500	333 45
		(Laid only fro	m Eastern to lane 948	feet	south).			
Leslie	W	Queen	Pt. 97 ft. s	12	97	3,031	75	81 18
"	W	"	Sproatt	4	1,904	20,789	600	494 90
Queen	S	Eastern	Pt. 597 ft. e	6	616	10,240	300	248 79
River	E	Oak	Bell	5⅓	210	3,052	100	133 29
Smith	S	Pape	Pt. 112 ft. e. of Poucher.	4	224	2,448	100	62 55
		(Laid only fro	m Pape to Poucher)					
Sumach	W	Pt. 69 ft. N. of Wilton.	Gerrard	6	773	12,785	360	422 50
Victor	S	Logan	East limit of Lot 10.	4	167	1,814	75	53 21
Wardell	W. &N.	DeGrassi	S. Avenue	5⅓	995	14,639	500	342 28
Woodbine	E	Queen	Pt. 200 ft. n	4	138	1,484	75	46 14
		(Except 64 ft.	opposite Mr. Willia	mso	n's pro	perty).		
Waverley	E	Queen	Pt. 625 ft. s	4	633	6,774	200	342 49
				Curbing ..		2,110		
				Spikes....		.....	25	
				Posts. 37.				

DISTRICT No. 3.

Street.	Side.	From	To	Width (feet)	Length (feet).	Lumber (feet).	Nails (lbs).	Total Cost.
								$
Pears.	N..	Avenue Rd. ...	Pt. 633 ft. e. of Avenue Road.	4	633	6,752	237	287 30
			Curbing	....	.....	1,950		
			Spikes	....	.....	.....	37	
			115 posts					
Shaftesb'ry	N..	Ottawa.....	Summerhill	6	560	8,960	260	385 27
			Curbing	....	.....	1,800		
			Spikes	....	.....	.....	45	
			105 posts					
Summerhill	S ..	Yonge	Ottawa.	5⅓	900	13,200	400	385 17
Walker ...	S ..	West side of House No. 67.	West end	5⅓	573	8,404	285	231 31

DISTRICT No. 4.

Street.	Side.	From	To	Width (feet).	Length (feet).	Lumber (feet)	Nails (lbs).	Total Cost.
								$
Albany....	E ..	Dupont	Pt. 858 feeet south..	4	865	9,227	325	237 93
Chicora ...	N ..	Avenue	Baptist Campus.....	5⅓	276	4,048	150	117 13
Davenport.	S. & W.	Avenue	Dupont	4	1,752	18,800	700	468 47
McMaster .	N ..	Avenue	Pt. 249½ feet west...	5⅓	249½	3,659	100	82 73

DISTRICT No. 5

Street.	Side.	From	To	Width (feet).	Length (feet)	Lumber (feet).	Nails (lbs).	Total Cost.
								$
Claremont.	E..	Arthur	Mansfield.....	5⅓	889	13,039	500	378 97
Delaware..	W.	Northumb'rl'nd	Van Horne.....	4	2,740	29,227	1,000	887 54
" ..	E..	Bloor	" "	4	3,108	33,152	1,250	900 60
Garnet	S..	Christie	West end	4	700	7,467	275	377 55
				Cur	bing ..	2,334		
				Spi	kes....	.....	50	
				116	posts.			
Manchester	S..	Ossington ...	Shaw	4	640	6,827	225	348 33
				Cur	bing ..	2,134		
				Spi	kes....	.....	50	
				108	posts.			
Northum-berland.	N..	Ossington	Preston	5⅓	283	4,150	150	113 32
Ossington .	E..	Bloor	Manchester.....	4	1,940	19,904	700	515 95
(Not laid in front of Nos. 517 to 523,—74 feet.								
Palmerston	E..	Barton	Folis	5⅓	542	7,958	300	217 57
Shaw	E..	College.....	Bloor	5⅓	2,843	41,698	1,600	949 09

DISTRICT No. 6.

Street.	Side.	From	To	Width (feet).	Length (feet.	Lumber (feet)	Nails (lbs.)	Total Cost.
								$
Bartlett ...	E..	Bloor	Hallam	5⅓	2,300	33,688	1,100	1,225 51
				Cur	bing ..	7,358		
				Spi	kes....	.....	100	
				440	posts..			
Brock	E..	Bloor	Pt. 150½ s. of north terminus.	4	848½	9,289	300	364 37
				Cur	bing ..	847		
				Spi	kes....	.....	75	
				118	posts..			
Brock	W.	Bloor	North end..... ...	4	999	10,774	400	436 88
				Cur	bing ..	3,823		
				Spi	kes....	.....	75	
				132	posts..			
Bank	S..	Sheridan	Dufferin	5⅓	512	7,709	250	336 80
				Cur	bing ..	1,587		
				Spi	kes....	.....	40	
				70	posts..			
Hallam ...	S..	Dovercourt....	Westmoreland	4	288	3,437	125	106 64
Lansdowne	W.	Janet	Wallace	4	900	9,610	300	237 93
Sheridan ..	E..	Bank	Pt. 324 ft. n	4	362	3,892	175	199 88
				Cur	bing ..	1,207		
				Spi	kes....	.....	25	
				50	posts..			
Sylvan	N..	Dufferin.....	Pt. 213 ft. e. of Gladstone.	6	633	10,446	350	248 60
Shirley....	S..	Brock	St. Clarens	5⅓	624	9,290	300	343 08
				Cur	bing ..	2,080		
				Spi	kes....	.....	40	
				82	posts..			
Wyndham.	N..	Brock	St. Clarens	5⅓	634	9,517	300	259 25

WATER WORKS.

REPORT FOR THE YEAR ENDING DECEMBER 31st, 1902.

CITY ENGINEER'S OFFICE,
Toronto, December 31st, 1902.

FINANCIAL.

The total expenditure for the year of the portion of the Water Works Department which is under the control of the City Engineer, amounted to $187,767.83, divided as follows:

Maintenance	$145,136 63
Construction	15,431 84
Renewals	6,836 76
Special Work	20,362 60

The expenditure of the Revenue and Collection Branch, under the control of the City Treasurer, amounted to $25,129.98.

DISTRIBUTION.

The total length of mains laid during the year is 23,287 feet, divided as follows:

21,908 feet of 6-in. cast-iron main.
1,199 " 4-in. "
180 " 2-in. wrought-iron service.

At the end of the year the total length of mains in use amounted to 264·46 miles. The length of mains laid this year shows a very large increase over the preceding year, when only 8,000 feet were laid.

SERVICES.

1,332 services were laid. This is an increase of 29 per cent. over the number laid last year.

LEAKS IN MAINS.

153 leaks in mains were repaired during the year, and the cost of this work, exclusive of repairs to asphalt pavements, was $874.00, an average of $5.71 per leak. The average number of leaks per mile of distribution is 0.57, and the average cost $3.30.

HYDRANTS.

Forty-three new fire hydrants have been placed on the streets during the year, making a total of 3,119 hydrants in use.

RESERVOIR.

The average daily quantity of water in the reservoir was 26,907,245 gallons. The reservoir was not cleaned during the year, and I would again call the attention of the Council to the necessity of having the concreting of the bottom and sides completed.

MAIN PUMPING STATION.

During the year the average quantity of water pumped per twenty-four hours was 21,905,914 imperial gallons. I would again urge upon the Council the necessity of taking steps to place our Water Works service in a more efficient condition.

I would suggest the advisability of providing a sufficient appropriation to permit of a more modern method of handling the coal at this Station. I am satisfied that considerable saving could be effected, and intend preparing plans for submission to the Council, showing the improvements contemplated.

TEMPERATURE OF WATER.

The average temperature for the year, taken at the tap in the City Hall, was 45.53 degrees Fah. The highest temperature, 64 degrees, occurred on the 23rd of September, and the lowest, 35 degrees, on the 16th of December.

During the year Professor Shuttleworth has made weekly bacteriological examinations of the City water supply, and the results show considerable improvement over previous years. The best results were obtained from May until October. March, September and October show the largest number of colonies of bacteria in one cubic centimeter of water. The large number in March were occasioned by the breaking up of the ice in the Bay. Professor Shuttleworth informs me that from these results he is satisfied there is not the slightest ground for any suspicion as to the integrity of the conduit, and believes the pipe to be perfectly tight. The water is conveyed to the citizens in precisely the same condition as it is taken in at the Island Basin.

Respectfully submitted,

C. H. RUST,

City Engineer, and Chief Engineer and Manager of the Water Works.

Report of Assistant Engineer in Charge of Water Works Construction, Distribution and Maintenance.

CITY ENGINEER'S DEPARTMENT,
Toronto, December 31st, 1902.

MR. C. H. RUST,
City Engineer.

DEAR SIR,—I submit herewith the Annual Report of this branch of the Department for the year ending 31st December, 1902.

DISTRIBUTION.

23,287 feet of mains have been laid this year, consisting of—

21,908	feet of	6-inch cast-iron main.
1,199	"	4-inch " "
180	"	2-inch wrought-iron service.
23,287	feet.	

At the end of the year the total length of mains in use was 264.466 miles.

STOP VALVES.

The number placed in position is as follows:

29	6-inch stop valves.
1	4-inch "
1	6-inch check valve.

Making a total in use of 2,385 stop valves and 67 check valves.

HYDRANTS.

Fire hydrants to the number of 43 have been placed on the streets during the year, consisting of 13 3-way and 30 2-way hydrants. In addition, 19 2-way hydrants have been replaced by 3-way hydrants and 3 2-way hydrants have been removed from off the streets, leaving a total of 3,119 in use on 31st December.

SERVICES.

1,332 services were laid this year, of which 5 are on the Island. This is an increase of 29 per cent. above the number laid last year.

LEAKS ON MAINS.

The following leaks on mains were repaired during the year:

3	on the	36-inch	mains.
5	"	24	"
1	"	20	"
64	"	12	"
3	"	10	"
1	"	8	"
74	"	6	"
2	"	4	"
Total....	153	of all sizes.	

The cost of repairs, exclusive of asphalt pavement, was $874, or an average cost of $5.71 per leak. The average number of leaks per mile of distribution is 0.57, and the average cost $3.30.

STORE HOUSE.

Supplies for the various Pumping Stations, Hydrant and Meter Departments, Reservoir and Maintenance Departments, have been fully maintained and the stock on hand on the 31st December verified.

STABLES.

The horses have been fully employed during the year, the cost being $4,234. The stalls and flooring require renewing and the drainage made good.

METER AND MACHINE SHOP.

124 additional meters were placed on services during the year; 734 meters were repaired without removal; 55 new boxes and 79 new frames were put in and 41 boxes and frames repaired. Renewing and overhauling repairs were made to the engines and pumps at Main, High Level and Island Pumping Stations, and in addition repairs were made to the City Hall plant, sand pump, hydrants and valves.

HYDRANTS AND VALVES.

The following work was performed by this branch of the Department:

HYDRANTS.

New valves	53
New joint rings	66
Hydrants replaced with repaired hydrants	65
New chain rings	40
Chain rings repaired	254
Hydrant screws replaced	88

Hydrant caps replaced	108
Hydrants cleaned, repaired, tested and painted	83
Hydrants jacketed and tested complete	41
Cap leathers	256
Hydrants tightened with bar and chain	20
Nozzles caulked	275
Hydrant packing nuts replaced	43
Hydrant standard die put over 2-way nozzles	1962
Small screws, 4-way hydrant	4
Small brass washers, 4-way hydrant	4
Small valves, 4-way hydrant	3
Hydrants waste hole opened with bar and chain	2
2-way hydrants replaced with 3-way hydrants	18
New 3-way hydrant detail work gone over and tested	20
American 4-way hydrant rebuilt, tested and painted	1

DOUBLE COCKS TESTED.

1x¾x¾-inch	¾x⅝x⅝-inch	⅝x½x½-inch
49	135	437

SINGLE COCKS TESTED.

1-inch	¾-inch	⅝-inch	3½-inch	⅜-inch
104	300	585	1692	118

COUPLINGS TESTED.

1-inch	⅝-inch	½-inch	⅜-inch
97	430	2080	102

RESERVOIR.

The average quantity of water per day in the Reservoir for the year was 26,907,245 gallons, equal to a depth of 17 feet 7 inches.

Seven times during the year, between 6 a.m. and 10 p.m., water was put in the Reservoir, the minimum quantity being 203,276 gallons per day, and the maximum 609,920 gallons, and then only on Sunday.

The Reservoir was not emptied for cleaning this year.

Attention is again directed to the necessity of completing the concreting of bottom and sides of same.

ISLAND PUMPING STATION.

Pumping at this Station began on the 1st of May and continued till the 1st November, when the Station was closed for the season.

HIGH LEVEL STATION.

The quantity of water re-pumped at this Station during the year was 1,260,521,777 gallons, averaging 3,453,454 gallons per day of 18½ hours, or at the rate of 5,023,248 gallons per 24 hours.

The total expenditure for the year was $10,506.93.

MAIN PUMPING STATION.

During the year 7,993,916,325 gallons of water were pumped by engines Nos. 1, 2, 4 and 5, engines Nos. 4 and 5 pumping 7,275,028,364 gallons, and Nos. 1 and 2 pumping 718,887,961 gallons.

The cost of operating the Station for the year was $74,625.82.

The engines have been kept in good condition and repair. Nos. 4 and 5 have averaged each 23 hours and 49 minutes run per day during the whole year.

The necessity of purchasing additional pumping plant is again urged.

TEMPERATURE OF WATER.

The average temperature for the year, taken at the City Hall tap, was 45.53 degrees Fahr. The highest temperature, 64 degrees Fahr. on 23rd day of September, and the lowest 35 degrees Fahr. on the 16th day of December.

MAINTENANCE AND DISTRIBUTION.

The work of this branch continues to increase, owing to the large number of local improvement works constructed, and the cost of repairs is also increasing owing to the advance in wages and the additional expense incurred in repairs on permanent roadways.

SAND PUMP.

The pump has been employed during the season cleaning out Keating's Channel, removing the bar formed in Shields' Cut and in constructing a channel from McLean's Pond, on the Island, through to the north end of St. Andrew's Avenue, filling in all low ground in the vicinity, the cost of operating, including considerable repairs to boiler, pumps, etc., being $5,393.04.

Respectfully submitted,

C. L. FELLOWES,
Deputy City Engineer.

SCHEDULES

WATER WORKS DEPARTMENT

NOTE.—For Schedule No. 1, "Cash Expenditure on Maintenance Account," etc., see page 128.

SCHEDULE No. 2.

STATEMENT OF WATER PUMPED BY ENGINES NOS. 1 AND 2 FOR THE YEAR 1902.

Month.	No. of Days on which Engines were Working.		Number of Hours Working Each Month.				Number of Strokes for Each Engine per Month.		Quantity of Water Pumped per Month by Each Engine in Imp. Gals. Gross.		Total Quantity Pumped in Imp. Gals. Gross.	Percentage of Slip.	Total Quantity Pumped in Imp. Gals. Net.	Average Pressure on Pumps.	Average Level of Water in Well Below Zero.		Total Quantity of Coal Consumed per Month by Nos. 1 and 2 Engines.	
	No. 1.	No. 2.	No. 1.		No. 2.		No. 1.	No. 2.	No. 1.	No. 2.								
			h.	m	h.	m.								Lbs.	Ft.	In.	Tons.	Lbs.
January	27	1	314	55	6	30	203,830	3,727	46,473,240	1,710,693	48,183,933	4	46,256,576	93.1	19	4	192	1,660
February	26	1	381	00	5	10	249,588	3,534	56,906,064	1,622,106	58,528,170	4	56,187,044	93.5	19	8	217	890
March	24	.....	278	00	..	..	191,598	.....	43,684,344	.....	43,684,344	4	41,936,971	93.3	18	7	147	620
April	15	11	173	20	122	20	117,147	68,065	26,709,516	31,241,835	57,951,351	4	55,633,297	92.9	18	1	215	115
May	12	15	151	30	162	52	106,662	94,344	24,318,936	43,303,896	67,622,832	4	64,917,919	94.0	18	1	216	700
June	24	2	342	50	21	55	241,186	13,584	54,990,408	6,235,056	61,225,464	4	58,776,446	94.3	18	4	204	1,030
July	27	5	369	25	44	25	268,944	26,774	61,319,232	12,289,266	73,608,498	4	70,664,159	94.0	18	3	213	1,390
August	24	6	321	05	59	05	224,538	35,694	51,194,664	16,383,546	67,578,210	4	64,875,082	94.2	17	10	213	850
September	27	9	521	50	74	45	353,335	45,512	80,560,380	20,890,008	101,450,388	4	97,392,373	95.8	18	6	301	1,060
October	26	2	349	50	13	20	253,189	7,467	57,727,092	3,427,353	61,154,445	4	58,708,268	93.9	17	11	202	960
November	24	1	286	10	3	50	209,932	2,492	47,864,496	1,143,828	49,008,324	4	47,047,992	95.1	18	5	156	1,390
December	29	.....	360	30	..	..	258,095	.....	58,845,660	.....	58,845,660	4	56,491,834	95.7	19	5	210	690
Totals	285	53	3,850	25	514	12	2,678,044	301,193	610,594,032	138,247,587	748,841,619	4	718,887,961	1,129.8	222	5	2,491	1,355
Monthly averages	23.7	5.3	320	12	42	51	223,170	25,099	50,882,836	11,520,632	62,403,468	4	59,907,330	94.1	18	6	207	1,218
Daily averages	.....	.....	13	30	9	42	9,361	5,683	2,142,435	2,608,445	2,215,508	4	2,126,887	94.1	18	6	7	743

SCHEDULE No. 3.

STATEMENT OF WATER PUMPED BY ENGINES NOS. 4 AND 5 FOR THE YEAR 1902.

Month.	No. of Days on which Engines were working.		Number of Hours working each Month.		Number of Strokes made by Engines each Month.		Quantity of Water Pump'd each Month by each Engine—Imperial Gallons—Gross.		Total Quantity Pumped by Nos. 4 & 5 Engines. Imp. Gallons Gross.	Percentage of Slip.	Total Quantity Pumped. Imp. Gallons Net.	Average Pressure on Pumps.	Average Lift by Engines.	Total Quantity of Coal used under Boilers each Month.
	No. 4.	No. 5.	No. 4.	No. 5.	No. 4.	No. 5.	No. 4.	No. 5.						
			h. m.	h. m.								Pounds.	Ft. In.	Tons. Lbs.
January	31	31	735 15	740 30	1,450,730	1,550,924	306,104,030	325,694,040	631,798,070	2	619,162,109	92.5	24 6	800 570
February	28	28	667 45	665 25	1,342,508	1,423,888	283,269,188	299,016,480	582,285,668	2	570,639,955	92.6	24 9	752 110
March	31	31	738 20	739 00	1,433,160	1,540,439	302,396,760	323,492,190	625,888,950	2	613,371,171	92.3	23 5	789 1,720
April	30	30	717 10	715 00	1,341,615	1,432,494	283,080,765	300,823,740	583,904,505	2	572,226,415	92.1	22 9	722 1,260
May	31	31	740 05	734 37	1,422,667	1,502,290	300,182,737	315,480,900	615,663,637	2	603,350,365	92.7	22 11	763 640
June	30	30	716 05	708 10	1,427,064	1,507,905	301,110,504	316,660,050	617,770,554	2	605,415,143	93.3	23 3	778 130
July	31	31	739 08	740 30	1,459,941	1,553,653	308,047,551	326,267,130	634,314,681	2	621,628,388	92.9	22 10	774 000
August	31	31	740 17	740 50	1,462,894	1,563,557	308,670,634	328,346,970	637,017,604	2	624,277,252	93.3	22 6	797 1,570
September	30	30	715 55	715 20	1,388,841	1,499,476	293,045,451	314,889,960	607,935,411	2	595,776,703	93.7	23 2	784 230
October	31	31	731 10	741 00	1,421,425	1,559,165	299,920,675	327,424,650	627,345,325	2	614,798,419	92.0	22 8	824 1,000
November	30	30	712 45	715 05	1,410,418	1,513,402	297,598,198	317,814,420	615,412,618	2	603,104,366	92.1	23 2	773 1,880
December	31	31	740 25	741 55	1,467,017	1,593,432	309,540,587	334,620,720	644,161,307	2	631,278,081	92.3	24 0	832 1,465
Totals	365	365	8,694 20	8,697 22	17,028,280	18,240,625	3,592,967,080	3,830,531,250	7,423,498,330	2	7,275,028,364	1,111.8	279 11	9,393 575
Monthly Averages	30.4	30.4	724 31	724 47	1,419,023	1,520,052	299,413,923	319,210,937	618,624,861	2	606,252,363	92.6	23 4	782 1,548
Daily Averages	.....	.....	23 49	23 49	46,652	49,974	9,843,745	10,494,606	20,338,351	2	19,931,584	92.6	23 4	25 1,470

SCHEDULE No. 4.

RECORD OF WATER RE-PUMPED AT HIGH LEVEL STATION FOR THE YEAR 1902.

Month.	Number of Hours Engines working.		Number of Revolutions made by Pumps.		Quantity of Water Re-pumped.		Total Quantity of Water Re-pumped by both Engines in Imp Gallons Gross.	Percentage of Slip.	Total Quantity of Water Re-pumped Imp. Gallons Net.	Average Pressure on Force Mains.	Average Pressure on Suction Mains.	Total Quantity of Coal Consumed under Boilers.		Coal Consumed for Banking Fires, Raising Steam, etc.		Coal Consumed while Pumping.	
	No. 1.	No. 2.	No. 1.	No. 2.	No. 1.	No. 2.											
	h. m	h. m.								Lbs.	Lbs.	Tons.	Lbs.	Tons	Lbs.	Tons	Lbs.
January	496 00	527 00	1,624,788	743,765	73,927,854	33,469,425	107,397,279	1	106,323,307	54.52	17.43	97	1,648	11	400	86	1,248
February	448 00	476 00	1,470,439	685,878	66,901,974	30,864,510	97,769,484	1	96,791,790	54.52	16.89	92	1,773	9	1,660	83	173
March	496 15	527 00	1,669,027	719,619	75,940,728	32,382,855	108,323,583	1	107,240,318	54.58	17.14	99	1,109	11	1,100	88	9
April	481 00	510 00	1,571,667	696,584	71,510,848	31,346,280	102,857,128	1	101,828,557	54.61	17.00	93	533	10	1,700	82	833
May	496 00	527 00	1,647,373	763,835	74,955,471	34,372,575	109,328,046	1	108,234,766	54.61	16.65	98	1,158	11	400	87	758
June	481 00	511 00	1,594,719	769,197	72,559,714	34,613,865	107,173,579	1	106,101,844	54.59	16.43	96	968	10	100	86	868
July	501 30	527 30	1,611,449	739,446	73,320,929	33,275,070	106,595,999	1	105,530,040	54.63	16.24	97	1,213	11	400	86	813
August	496 15	527 00	1,563,364	784,310	71,133,062	35,293,950	106,427,012	1	105,362,742	54.55	16.66	100	473	10	1,700	89	773
September	480 00	510 00	1,544,457	743,884	70,272,793	33,474,780	103,747,573	1	102,710,098	54.57	16.70	99	443	10	1,700	88	743
October	497 00	528 00	1,626,491	774,846	74,005,340	34,866,720	108,872,060	1	107,783,340	54.57	16.30	104	1,428	11	400	93	1,028
November	480 00	510 00	1,540,735	767,956	70,103,442	34,558,020	104,661,462	1	103,614,848	54.61	16.42	98	1,438	10	1,700	87	1,738
December	505 00	533 00	1,604,367	824,498	72,998,698	37,102,410	110,101,108	1	109,000,097	54.85	15.99	101	623	10	100	91	523
Totals	5,858 00	6,213 30	19,068,876	9,013,788	867,633,853	405,620,460	1,273,254,313	1	1,260,521,777	655.21	199.85	1,180	807	129	1,300	1,050	1,507
Monthly Averages	488 10	517 47	1,589,073	751,149	72,302,821	33,801,705	106,104,526	1	105,043,481	54.60	16.65	98	734	10	1,608	87	1,125
Daily Averages	16 03	17 01	52,243	24,695	2,377,079	1,111,288	3,488,368		3,453,484	54,60	16.65	3	468		710	2	1,757

COMPARATIVE STATEMENT OF COAL CONSUME

MONTH.	1901.			
	Engine Nos.	Water.		
		Quantity Pumped.	Total Quantity Pumped.	Quant Consur
		Imp. Gals. Net.	Imp. Gals. Net.	Tons.
January	1 and 2	161,002,537		451
	4 and 5	520,517,843		721
			681,520,380	
February	1 and 2	74,100,712		273
	4 and 5	572,426,569		785
			646,527,281	
March	1 and 2	106,129,336		418
	4 and 5	626,064,299		805
			732,193,635	
April	1 and 2	92,238,326		382
	4 and 5	582,402,736		778
			674,641,062	
May	1 and 2	214,942,425		584
	4 and 5	456,457,785		589
			671,400,200	
June	1 and 2	67,120,405		214
	4 and 5	597,767,169		711
			664,887,574	
July	1 and 2	137,215,631		441
	4 and 5	624,826,243		782
			762,041,874	
August	1 and 2	108,613,136		382
	4 and 5	629,909,996		791
			738,523,132	
September	1 and 2	90,651,543		331
	4 and 5	615,776,679		776
			706,428,222	
October	1 and 2	69,620,781		227
	4 and 5	635,546,148		799
			705,166,929	
November	1 and 2	44,778,307		176
	4 and 5	611,381,820		781
			656,160,127	
December	1 and 2	40,503,909		154
	4 and 5	619,304,140		787
			659,808,049	
Totals			8,299,298,465	
Daily average			22,463,831	

E No. 5.

PUMPED BY MONTHS FOR THE YEARS 1901 AND 1902.

tal aption.		1902.			
		Water.		Coal.	
	Engine Nos.	Quantity Pumped.	Total Quantity Pumped.	Quantity Consumed.	Total Consumption.
s. Lbs.		Imp. Gals. Net.	Imp. Gals. Net.	Tons. Lbs.	Tons. Lbs.
	1 and 2	46,256,576		192 1,660	
	4 and 5	619,162,109		800 570	
2 1,080			665,418,685		993 230
	1 and 2	56,187,044		217 890	
	4 and 5	570,639,955		752 110	
3 1,050			626,826,999		969 1,000
	1 and 2	41,936,971		147 620	
	4 and 5	613,371,171		789 1,720	
3 765			655,308,142		937 340
	1 and 2	55,633,297		215 115	
	4 and 5	572,226,415		722 1,260	
0 1,200			627,859,712		937 1,375
	1 and 2	64,917,919		216 700	
	4 and 5	603,350,365		763 640	
4 380			668,268,284		979 1,340
	1 and 2	58,776,446		204 1,030	
	4 and 5	605,415,143		778 130	
5 1,775			664,191,589		982 1,160
	1 and 2	70,664,159		213 1,390	
	4 and 5	621,628,388		774 000	
3 1,160			692,292,547		987 1,390
	1 and 2	64,875,082		213 850	
	4 and 5	624,277,252		797 1,570	
3 350			689,152,334		1,011 420
	1 and 2	97,392,373		301 1,060	
	4 and 5	595,776,703		784 230	
7 950			693,169,076		1,085 1,290
	1 and 2	58,708,268		202 960	
	4 and 5	614,798,419		824 1,000	
5 1,560			673,506,687		1,026 1,960
	1 and 2	47,047,992		156 1,390	
	4 and 5	603,104,366		773 1,880	
5 980			650,152,358		930 1,270
	1 and 2	56,491,834		210 690	
	4 and 5	631,278,081		832 1,465	
1 1,390			687,769,915		1,043 155
6 640	.....	.....	7,993,916,325	.....	11,884 1,930
6 34	.....	.....	21,901,140	.....	32 575

SCHEDULE No. 6.

COMPARATIVE STATEMENT SHOWING NUMBER OF GALLONS PUMPED, QUANTITY AND COST OF FUEL, ETC., FROM 1876 TO 1902, INCLUSIVE.

YEAR.	Total Water Pumped — Imp. Gals.	Quantity of Fuel. Lbs.	Total Cost of Fuel.	Average Daily Quantity of Water Pumped — Imp. Gals.	Average Daily Consumption of Coal. Lbs.	Water Pumped per Pound of Fuel. — Imp. Gals.
			$ c.			
1876	1,625,139,876	6,998,282	19,645 75	4,451,202	19,093	232.55
1877	2,633,433,932	10,407,992	25,556 29	7,214,887	28,515	253.02
1878	1,417,370,918	8,120,000	15,196 20	3,883,208	22,246	174.55
1879	1,610,104,542	10,872,211	19,313 07	4,411,245	29,787	148.09
1880	1,785,859,706	11,694,808	28,455 72	4,879,422	31,953	152.17
1881	1,910,430,419	12,391,874	31,410 04	5,234,056	33,950	154.18
1882	2,108,933,115	11,685,556	30,170 64	5,777,899	32,015	180.47
1883	2,809,965,484	17,266,679	43,529 08	7,698,511	47,306	162.74
1884	3,645,442,082	19,920,782	52,525 56	9,960,224	54,428	183.00
1885	3,537,482,598	18,644,465	46,589 27	9,691,733	51,081	189.73
1886	4,134,376,998	19,285,371	41,979 32	11,327,060	52,837	214.37
1887	4,417,938,169	23,283,900	50,051 85	12,103,940	63,791	189.74
1888	4,041,964,514	20,457,935	46,600 77	11,073,875	56,049	197.57
1889	4,148,781,634	19,231,940	44,135 10	11,366,525	52,690	215.72
1890	5,249,760,226	34,615,850	56,239 99	14,382,904	67,536	212.96
1891	6,207,656,403	29,300,240	60,012 77	17,007,275	80,291	211.86
1892	6,659,925,650	34,565,875	71,805 25	18,246,371	94,278	193.00
1893	6,646,021,488	26,013,840	64,702 86	18,208,278	71,270	255.47
1894	6,589,492,142	26,822,145	54,902 85	18,053,403	73,485	245.67*
1895	6,639,680,218	21,178,879	40,221 85	18,190,902	58,024	313.5*
1896	6,781,187,980	18,606,508	25,307 90	18,527,836	50,837	364.4
1897	6,723,757,030	20,711,250	26,880 50	18,421,253	56,743	324.64
1898	7,136,334,102	22,100,145	27,572 00	19,551,600	60,548	322.91
1899	7,824,348,217	24,682,935	26,684 57	21,436,569	67,624	316.99
1900	8,064,384,595	24,148,565	38,668 54	22,094,204	66,160	333.95
1901	8,299,298,465	26,292,640	39,402 87	22,463,831	72,034	314.89
1902	7,993,916,325	23,769,930	39,260 22	21,901,140	64,575	339.15

* A larger percentage was allowed for slip in 1894 and 1895, than in other years.

SCHEDULE No. 7.

QUANTITY OF WATER PUMPED AND QUANTITY CONSUMED DURING EACH MONTH OF 1902, WITH AMOUNT OF DAILY CONSUMPTION.

Month.	Total Quantity Pumped per Month in Imperial Gallons	Quantity Stored in Reservoir at end of each Month. Imperial Gallons	Quantity Consumed during each Month. Imperial Gallons	Average Daily Consumption of Water. Imperial Gallons	Average Daily Consumption of Coal at Main Pumping Station	
					Tons.	Lbs.
Stored in Reservoir on 31st December, 1901	.....	27,494,764	.....	.....	.....	.....
January	665,418,685	25,421,180	667,492,269	21 532,009	32	072
February	626,826,999	25,217,904	627,030,275	22,393,938	34	1,250
March	655,308,142	27,909,180	652,616,566	21.052,147	30	462
April	627,859,712	26,872,689	628,896,503	20,963,216	31	512
May	668,268,284	25,421,180	669,719.793	21.603,864	31	1,204
June	664,191,589	27,494,764	662,118,005	22.070,600	32	1,505
July	692,292,547	25,628,538	694,158,773	22,392,218	31	1,722
August	689,152,334	24,201,520	690,579,352	22,276,753	32	1,235
September	693,169,076	27,080,047	690,290,549	23,009,685	36	376
October	673,506,687	27,080,047	673,506,687	21,726,022	33	257
November	650,152,358	27,702,122	649,530,283	21,651,009	31	042
December	687,769,915	27,287,406	688,184,631	22,199,504	33	1,295
Totals	7,993,916,325	.....	.....	262,870,965	390	1,936
Averages	666,243,027	.....	.....	21,905,914	32	1,161

SCHEDULE No. 8.

COMPARATIVE STATEMENT SHOWING INCREASE OF DEPARTMENT YEARLY, 1875 TO 1902 INCLUSIVE.

YEAR.	Average Daily Consumption of Water.	Population.	Average Daily Consumption of Water per Capita for all Purposes.	Total Number of House Services in use in each year.	Number of House Services put in each year.	Total Number of Hoists in use in each year.	Total Number of Meters in use each year.	Total Number of Miles of Mains in use each year.	Average Pressure on Pumps.				
									No. 1, Worthington Engine.	No. 2, Worthington Engine.	No. 3, Inglis & Hunter.	No. 4, Blake Engine.	No. 5, Blake Engine.
			Gallons.					Miles.					
1875	3,424,000	68,678	49.86	2,769	842	.....	.....	49.810	88.10	.....	.....	.....	.....
1876	4,451,202	71,693	62.09	3,512	740	.....	.....	80.250	88.78	97.51	.....	.....	.....
1877	2,812,000	67,386	41.74	4,518	1,006	.....	.....	107.570	83.33	97.69	.....	.....	.....
1878	3,883,208	70,867	54.79	6,707	2,189	28	.....	110.240	89.65	96.64	.....	.....	.....
1879	4,411,245	73,813	59.76	8,568	1,861	47	.....	111.290	95.28	99.04	.....	.....	.....
1880	4,879,422	75,110	64.96	.....	1,014	66	.....	113.312	98.22	99.52	.....	.....	.....
1881	5,234,056	76,934	68.03	12,236	2,654	79	.....	115.518	96.32	100.78	.....	.....	.....
1882	5,777,899	81,372	71.01	14,062	1,826	94	.....	116.145	94.85	101.66	.....	.....	.....
1883	7,698,511	91,796	83.87	16,276	1,766 448	109	.....	131.352	94.27	105.49	.....	.....	.....
1884	9,960,224	105,211	94.66	18,363	2,087	130	.....	138.301	99.14	107.03	.....	.....	.....
1885	9,706,127	111,800	86.82	20,707	2,344	140	195	143.257	98.84	106.45	103.88	.....	.....
1886	11,344,337	118,403	95.81	23,643	2,936	152	256	156.042	104.88	104.92	104.67	.....	.....
1887	12,060,616	126,169	95.59	26,893	3,315	176	332	165.894	.....	.....	.....	.....	.....
1888	11,069,784	166,809	66.36	29,883	3,055	174	897	182.625	93.41	92.36	94.57	.....	.....
1889	11,378,962	175,000	65.02	34,056	3,288	222	1,347	212.832	94.25	94.82	94.92	.....	.....
1890	14,434,722	185,000	78.02	36,192	2,191	229	1,479	229.257	92.83	93.55	93.58	.....	.....
1891	17,007,275	188,904	90.03	38,250	2,111	230	1,544	237.957	93.33	93.66	93.91	.....	.....
1892	18,246,371	188,904	96.59	39,401	1,200	288	1,535	242.561	.....	.....	.....	.....	.....
1893	18,208,278	188,904	96.38	39,927	526	300	1,600	244.964	94.18	94.18	94.18	96.37	.....
1894	18,056,881	188,904	95.58	40,326	399	258	1,580	245.478	94.88	94.88	94.88	95.24	95.24
1895	18,192,063	190,000	95.74	40,683	357	.....	1,500	.....	94.83	94.88	94.88	95.05	95.05
1896	18,527,836	195,987	94.53	40,951	313	230	1,553	249.627	94.5	94.5	94.5	95.4	95.4
1897	18,378,722	195,987	93.77	41,315	364	230	1,553	252.646	95.1	95.1	95.1	95.7	95.7
1898	19,576,957	200,000	97.88	41,838	523	230	1,580	255.625	95.3	95.3	95.3	95.9	95.9
1899	21,436,509	225,000	95.27	42,552	714	230	1,598	257,613	94.9	94.9	94.9	95.3	93.3
1900	22,094,204	235,000	94.01	43,242	690	230	1,700	258,774	94.0	94.0	94.0	93.5	93.5
1901	22,507,266	235,000	95.77	44,275	1,033	239	1,800	260,321	93.8	93.8	93.8	93.2	93.2
1902	21,901,140	236,000	88.57	45,607	1,319	241	1,830	264,466	94.1	94.1	94.1	92.6	92.6

SCHEDULE No. 9.

Record of Gauging at Rosehill Reservoir for each Month of 1902.

Month, 1902.	Elevation of Lowest Water Above Zero.	Elevation of Highest Water Above Zero.	Average Elevation Above Zero.	Average Depth in Reservoir.	Average Contents in Imperial Gallons.
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	
January	212 11	214 3	213 8	17 8	27,080,047
February	211 9	213 11	213 ..	17 ..	25,421,180
March	213 4	214 3	213 9	17 9	27,287,406
April	213 1	214 4	213 8	17 8	27,080,047
May	212 10	214 ..	213 7	17 7	26,872,689
June	212 5	214 2	213 6	17 6	26,665,331
July	211 11	214 5	213 6	17 6	26,665,331
August	211 9	214 3	213 6	17 6	26,665,331
September	213 1	214 5	213 9	17 9	27,287,406
October	212 11	214 4	213 10	17 10	27,494,764
November	213 2	214 4	213 9	17 9	27,287,406
December	212 10	214 6	213 8	17 8	27,080,047
Averages	.....	.. ..	213 7	17 7	26,907,248

Note.—The average depth of water in the Reservoir for the year was 17 ft. 7 in., equal to an elevation of 213 ft. 7 in. above zero.

SCHEDULE No. 10.

STATEMENT OF MAINS LAID DURING THE YEAR 1902.

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
6-IN SUB-MAINS:			
Ashport Av.	West	From Queen St. e., 194 ft. n.	208
Barton Av.	North	" Howland Av., 168 ft. w.	180
Beatrice	West	" College St., 422 ft. n.	431
Bedford Rd.	West	" Davenport Rd. 289 ft. n.	328
Brock Av.	West	" 810 ft. n. of Bloor St , 115 ft. n.	115
Campbell Av.	West	" Wallace Ave. to Royce Ave.	1,691
Carling Av.	East	" Bloor St. 157 ft. n.	207
Chicora Av.	North	" 330 ft. w. of Avenue Rd., 267 ft. w.	267
Clinton	West	" 350 ft. s. of Follis Ave., 98 ft. s.	98
Danforth Av.	South	" Broadview Ave. to 807 ft. e. of Hampton St.	2,158½
Dawson	North	" Dunedin Ave. 127 ft. e.	145
Don Esplanade	West	" Eastern Ave., 420 ft. n.	458½
Duncan	East	" Adelaide St. 212 ft. s.	235
Elm Av.	North	" 158 ft. w. of Nanton Crest., 161 ft. w.	161
Empress Cresc.	South	" Dowling Ave. 330 ft. w.	416½
Gladstone Av.	West	" 250 ft. n. of Gladstone Pl. 168 ft. n.	168
Greenwoods Av.	West	" 969 ft. n. of Queen to 94 ft. s. of Chatham St.	5,044
Havelock	West	" Dewson St. 253 ft. n.	255
Jefferson Av.	West	" King St. to Liberty St.	727
Kenilworth	East	" Queen St. e. 1190 ft. s.	1,242
Kippendavie Av.	West	" Kew Beach, 488½ ft. n.	510½
Laxton Av.	South	" Jameson Ave. 344 ft. w.	366
Leuty Av.	West	" Violet Ave. 540 ft. s.	553
Liberty	North	" Fraser Ave. to Atlantic Ave.	980
MacPherson Av.	North	" Avenue Rd. 280 ft. w. to old pipe.	331
MacPherson Av.	North	" Yonge St. 380 ft. e.	426
N. Lansdowne Av.	West	" Wallace Ave. 490 ft. n.	511
Pendrith Av.	North	" Christie St. 473 ft. w.	483½
Roxborough Av	North	" 884 ft. w. of Yonge St. 208 ft. w.	208
Roxborough Av.	South	" 50 ft. e. of Scarth Rd. 148 ft. e.	148
Ruskin Av.	North	" 138 ft. w. of Perth Ave, 194 ft. w.	194
St. George	West	" 800 ft. n. of Lowther Ave. to 120 ft. s. of Bernard Ave.	229
Shanly	North	" West line of Hamburgh Ave. 134 ft. e.	134
Simpson Av.	North	" 615 ft. e. of Broadview Ave. 210 ft. e.	210
South Av.	North	" Tiverton Ave. to West Ave.	251
Spadina Rd.	West	" 127 ft. n. of Bernard Ave. to 120 ft. south of Dupont St.	431
Strange	West	" 325 ft. s. of Queen St., 149 ft. s.	149
Symington Av.	West	" 323 ft. n. of Ernest Ave. to Wallace Ave	255
Violet Ave.	South	" Lee Ave. to Leuty Ave.	387
Wallace Av.	North	" Symington Ave. to Campbell Ave.	336
Wardell	East	" 12 ft. s. of South Ave. n. to main (connection)	50½
West Ave.	West	" South Ave. 78½ ft. n.	119
Withrow Av.	North	" 597 ft. e. of Broadview Ave. 110 ft. e	110
		Total	21,908

Street, Avenue, Etc.	Side of Street.	Location.	Length in Feet.
4-in. Sub-Mains :			
Hogarth Av.	North	From 39 ft. w. of Hampton Ave. e.	697
Phipps	North	" St. Vincent St. 160 ft. e.	183
Sackville Pl.	North	" Bowman Ave. main 110 ft. e.	110
Van Koughnet	South	" Borden St. 187 ft. w.	209
		Total	1,199

Mains throughout the City of all sizes and descriptions, including those on Streets, Government, Private and other Property, at end of the Year.

Size and Description.	Total length in feet in use at end of 1901.	Put in during 1902.	Abandoned during 1902.	Total length in feet in use at end of 1902.
36-inch mains	2,780			2,780
30-inch "	11,292			11,292
24-inch "	27,779			27,779
20-inch "	3,953			3,953
16-inch "	325			325
12 inch "	246,165¾			246,165¾
10 inch sub-mains	14,195			14,195
8 inch "	7,275			7,275
6-inch "	990,334¾	21,908		1,012,242¾
4-inch "	45,507½	1,199		46,706½
3-inch "	10,586			10,586
2-inch and 1-inch service mains	5,578½	180		5,758½
Old 8-inch cast iron mains	6,085			6,085
Old 8 inch cement mains	1,240			1,240
	1,373,096½	23,287		1,396,383½

The total length in use at end of the year—1,396,383½ feet, or 264 466 miles.

SCHEDULE No. 11.

STATEMENT OF HYDRANTS PLACED IN POSITION DURING THE YEAR 1902.

Street, Avenue, Etc.	Side of Street.	Location.
NEW HYDRANTS PLACED ON STREETS.		
Avenue Rd.....	East	9 feet south of Czar Street (3-way).
Bathurst Street...	"	50 feet south of Bridge (3-way).
Beatrice Street....	West	322 feet north of College Street.
Bedford Rd	"	287½ feet north of Davenport Road (3-way).
Campbell Av.....	"	127½ feet north of Wallace Avenue.
Campbell Av	"	468½ feet north of Wallace Avenue.
Campbell Av	"	111½ feet south of Irving Avenue.
Cottingham Street.	North	530 feet east of Avenue Road (3-way).
Danforth Av.....	South	407½ feet east of Broadview Avenue.
Danforth Av.	"	843 feet east of Broadview Avenue.
Danforth Av.....	"	394¾ feet east of Hampton Avenue.
Danforth Av.....	"	789½ feet east of Hampton Avenue.
Don Esplanade....	West	415 feet north of Eastern Avenue
Duncan Street	East	169 feet south of Adelaide Street (3-way).
Empress Crescent.	South	370 feet west of Dowling Avenue.
Eastern Avenue ..	North	14¾ feet east of Carline Avenue (3-way)
Esplanade	South	130 feet east of Scott, south of tracks, opp. Electric Light Company (3-way).
Gore Vale Av.....	West	244½ feet south of Arthur Street (3-way).
Greenwoods Av....	"	1049½ feet south of Gerrard Street.
Greenwoods Av....	"	651 feet south of Gerrard Street.
Greenwoods Av....	"	38 feet north of Gerrard Street.
Greenwoods Av....	"	1845½ feet south of Chatham Street.
Greenwoods Av....	"	1355½ feet south of Chatham Street.
Greenwoods Av....	"	993 feet south of Chatham Street.
Hogarth Av	North	600 feet east of Hampton Avenue.
Inglewood Av.....	"	282 feet east of Pape Avenue.
Inglewood Av.....	"	278½ feet west of Jones Avenue.
Jarvis Street.....	West	50 feet south of Front Street (3 way).
Jefferson Av.....	"	301 feet north of Liberty Street (3-way).
Kenilworth Av....	East	350½ feet south of Queen Street.
Kenilworth Av....	"	771½ feet south of Queen Street.
Kenilworth Av....	"	1187½ feet south of Queen Street.
Kippendavie Av ..	West	484½ feet north of Lake Shore Road.
Laxton Av.....	South	268¼ feet west of Jameson Avenue.
Leuty Av	West	519 feet south of Violet Avenue.
Liberty Street	North	289½ east of Fraser Avenue (3-way).
Liberty Street	"	40 feet west of Jefferson Avenue (3-way).
Louisa Street	"	125 feet east east of James Street.
Louisa Street	"	112 feet east of Teraulay Street.
N. Lansdowne Av..	West	487 feet north of Wallace Avenue.
Spadina Rd	"	232 feet north of Bernard Avenue.
Stewart Street	North	7½ feet east of Bathurst Street (3-way).
Strange Street	West	474 feet south of Queen Street.
3-WAY HYDRANTS, REPLACING 2 WAY ALREADY IN POSITION.		
Adelaide Street ...	North	184 feet east of York Street.
Cattle Market	East	252 feet west of Tecumseth Street.
Church Street	West	South-west corner of King Street.
Dunn Av.....	East	540 feet south of King Street.
Elizabeth Street ..	West	North-west corner of Queen Street.
King Street	South	168 feet east of York Street.
King Street	North	409 feet west of Spadina Avenue.

Summary of Hydrants.

Street, Avenue, Etc.	Side of Street.	Location.
King Street	North	180 feet east of Bathurst Street.
Macdonald Sq	South	308 feet west of Bathurst Street.
Macdonald Sq	"	South-west corner of Bathurst Street.
Niagara Street....	"	South-west corner of Tecumseth Street.
Queen Street.....	"	South-east corner of Yonge Street.
Richmond Street..	North	250 feet east of York Street.
Simcoe Street	East	North-east corner of Queen Street.
Wellington Av	South	180 feet east of York Street.
Wilton Av.....	North	North-east corner of Victoria Street.
Yonge Street.....	West	100 feet north of Gerrard Street.
York Street	"	North-west corner of King Street.
York Street	"	80 feet south of Station Street.
2-way Hydrants Removed from off the Street.		
Jarvis Street.....	West	At south-west corner of Front Street.
Strange Street	"	325 feet south of Queen Street.
Esplanade	South	50 feet east of Scott Street, opp. Electric Light Company Works.

Note.—The Hydrant at north end of Mincing Lane was removed from the west to the east side of the street.

Summary of Hydrants.

Number of Hydrants of all kinds on streets at end of 1901.....	2,992
" " on private and other property at end of 1901.....	87
	3,079
There were removed from off the streets, 3 2 way Hydrants and 19 2-way Hydrants were replaced by 3-way Hydrants.....	22
	3,057
Number of additional Hydrants set on streets during 1902	43
" 3-way Hydrants replacing 2-ways already set on streets	19
Total number of Hydrants in use at end of 1902	3,119

SCHEDULE No. 12.

TOTAL LIST OF ALL VALVES PLACED IN POSITION DURING THE YEAR 1902, SHEWING THE SIZE, POSITION, ETC.

Street, Avenue, Etc.	Side of Street.	Location.
6-IN. STOP VALVES:		
Atlantic Av.	West	North line of Liberty St.
Beatrice	"	North " College St.
Bedford Rd.	"	North " Davenport Rd.
Campbell Av.	"	South " Royce Av.
"	"	North " Wallace Av.
Carling Av.	East	North " Bloor St.
Don Esplanade	West	North " Eastern Av.
Duncan	East	South " Adelaide St.
Empress Cresc.	South	West " Dowling Av.
Greenwoods Av.	West	1254 feet north of Queen St.
"	"	South line of Gerrard St.
"	"	North " "
"	"	South side of G. T. R. tracks.
"	"	North " G. T. R. tracks.
Jefferson Av	"	North line of Liberty St.
Kenilworth Av.	East	South " Queen St.
Kippendavie Av	West	174 ft. north of Kew Beach.
Laxton Av.	South	West line of Jameson Av.
Liberty	North	East " Fraser Av.
"	"	West " Atlantic Av.
"	"	East " "
Macpherson Av.	"	West " Avenue Rd.
"	"	East " Yonge St.
N. Lansdowne Av.	West	North " Wallace Ave.
Pendrith Av.	North	West " Christie St.
South Av.	"	Opp. east line of Wardell St.
Symington Av.	West	South line of Wallace Av.
Violet Av.	South	East " Lee Av.
Wardell	East	South " South Av.

Street, Avenue, Etc.	Side of Street.	Location.
6-IN. CHECK VALVE:		
Macpherson Av.	North	West line of Avenue Rd.
4-IN. STOP VALVES:		
Phipps	North	East line of St. Vincent St.

Summary of Valves on Streets at End of 1902.

Size and Description.	In use at end of 1901.	Put in during 1902.	Taken out during 1902.	Total at the end of 1902.
Stop Valves :				
36 inches	4	.....	.....	4
30 "	8	.....	.....	8
24 "	17	.....	.....	17
20 "	2	.....	.....	2
12 "	456	.....	.....	456
10 "	6	.....	.....	6
9 "	6	.....	.....	6
8 "	12	.....	.....	12
6 "	1,736	29	.....	1,765
4 "	79	1	.....	80
3 "	29	.....	.....	29
Totals	2,355	30	.....	2,385
Check Valves.				
36 inches	5	.....	.....	5
30 "	4	.....	.....	4
24 "	1	.....	.....	1
20 "	1	.....	.....	1
12 "	11	.....	.....	11
6 "	44	1	.....	45
Totals	66	1	.....	67

SCHEDULE No. 13.

STATEMENT OF HOUSE SERVICES LAID DURING 1902.

Name of Street.	Size of Services.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Agnes	1							
Albany Ave	17	20						
Adelaide					1			
"	1							
Arthur	10							
Avenue Rd	1	1	1	1	1		1	
Alice		1					1	
Austin Ave	2							
Armoury	2							
Abell					1			
Augusta Ave	4							
Anne	8							
Ashport Ave	1							
Admiral Rd		1						
Brock Ave	18							
Baldwin		2						
Boustead Ave	3							
Bismark Ave	3		1					
Bathurst	17	2	2	1	2			
Beatrice	8							
Bloor, west	28		3		1		1	
Bloor, east				1				
Bellwoods Ave	6							
Bedford Rd	4		1					
Brookfield Ave	2							
Broadview Ave	3				2			
Brant	1							
Bartlett Ave	1							
Burnfield Ave	3							
Brunswick Ave	5	3						
Bolton Ave	3							
Bay					1			
Barton Ave	3	2						
Bowman	1							
Bulwer	2							
Belmont	2							
Bain Ave	2							
Beau					1			
Breadalbane	1							
Boswell Ave	2							
Court			1					
College	13		2					
Concord Ave	14							1
Clara	1							
Chicora Ave	5	2						

HOUSE SERVICES LAID DURING 1902—*Continued.*

Name of Streets.	Size of Services.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Crawford	7	1						
Close Ave	7	6						
Crescent Rd			6	2	1			
Cobourg Ave	2							
Clinton	3							
Colborne							1	
Cluney Ave			4	1				
Cottingham	4	1						
Chestnut	7							
Claremont	4							
Cowan Ave	1							
Columbus Ave	1							
Czar	1							
Carlton				1				
Carlaw Ave	1	1						
Campbell Ave	24							
Church	4	3						
Christie	2							
Carling Ave	2							
Chesley	1							
Caroline	1							
Dovercourt Rd	18	1						
Dora Ave	3							
Dundas	15							
Davenport Rd	1			1				
Dawson Ave	2							
Delaware Ave	22	2						
Duke					1			1
Dean	2							
Dufferin	23	3			2			
Denison Ave				1				
Dewson	1							
Dalhousie	1							1
Dunn Ave			1					
DeGrassi	1							
Dupont	4							
Dunbar Rd			2					
Duncan					2			
Don Esplanade				1	1			
Danforth Ave			5					
Defoe	1							
Dagmar Ave	2							
Esplanade, West				1				
Eastern Ave	6				1		1	
Euclid Ave	12	1						
Elm	2							
Elm Ave			1	2				
Edwin Ave	1							

HOUSE SERVICES LAID DURING 1902.—*Continued.*

Name of Street.	Size of Services.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Elgin Ave	8							
Exhibition Grounds			1		3			
Empress Crest	3							
Essex	1							
Edward	2							
Elliott	4							
Elizabeth	1							
Englewood Ave	1							
Frederick							1	1
First Ave	3			1				
Fenning	1							
Franklyn Ave	2							
Follis Ave	1							
Fern Ave	4							
Fisher	1							
Fuller		1						
Farley Ave	1							
Florence	2							
Front, East	4							
Gladstone Ave	12			1				
Gerrard, East	15							
George	1	1	1	2				1
Glen Rd			1	1				
Givens	13							
Galt Ave	2							
Garden Ave	4							
Gore Vale Ave	16							
Golden Ave	1							
Garnet Ave	1							
Grace	1			1				
Greenwoods Ave	9		2	1				
Grenville			1					
Grant	1							
Hayter	1							
Harvard Ave	4							
Howard		2	1					
Howland Ave	2	8						
Huron	2	10						
Homewood Ave					1			
Hunter	2							
Hickson	1							
Hamilton	8							
Hayden					2			
Hogarth Ave	3	1						
Hamburg Ave	2							
Huxley	1							
Havelock	1							
Indian Rd				1	1			

House Services Laid During 1902.—*Continued.*

Name of Street.	Size of Services.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Isabella		2		1				
Jefferson Ave	1						1	
Jones Ave	1				1			
John				1				
King, West	9	1	2	3	1			1
Kew Beach	4							
Kippendavie Ave	2							
Ketchum Ave	2							
Kenilworth Ave	10							
Lansdowne Ave	8							
Logan Ave	10							
Langley Ave	4							
Leslie	3							
Liberty					1			
Laxton Ave			3					
Lenty Ave	21			1				
Lee Ave	2							
Lewis	2							
Lippincott	1							
Lindsay Ave	1							
Laburnam Ave		1						
Leonard Ave	2							
Lombard				1				
Markham	10							
Macpherson Ave	4		1					
Mincing Lane		1						
Mission Ave	1							
Manning Ave	16	4						
Margueretta	8							
Mitchell Ave	2							
Maple Ave			1	1				
Melville Ave	3							
Marion		1						
Mutual	2							
Marlborough Ave	5	2		1				
Maitland Pl	2							
Moutray		1						
Maynard Ave		2	1					
Massey	1							
Madison Ave			2					
Macdonell Ave	4							
Montrose Ave	1							
Melinda							1	
McGee	1							
McMaster Ave	1	1						
McAlpine Ave	4							
Nanton Cres			1	1	1			
North Markham	1							

HOUSE SERVICES LAID DURING 1902.—*Continued.*

Name of Street.	Size of Services.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Niagara	2							
North Lansdowne	6							
Northumberland Ave	4							
Northern Pl	1							
Ontario	1							
O'Hara Ave	2							
Oxford	1							
Osler Ave	3							
Ossington Ave	2							
Orde	1							
Perth Ave	15	2						
Pape Ave	3							
Powell			1					
Price	4							
Portland	1							1
Pearson Ave	3							
Park Rd		2	1					
Palmerston Ave	3							
Pacific Ave	11							
Pearl								1
Parliament	1			1				
Pendrith	17							
Preston Ave	4							
Pears Ave	4							
Parkman Ave	1							
Peter	5			1				
Phoebe	1			1				
Phipps	2							
Pearce	2							
Queen, West	12		1	1				
Queen, East	9	1		1				
Queen's Park							1	
Ruskin Ave	3							
Roseberry Ave	4							
River	2							
Robert	1							
Roncesvalles Ave		1	2	2				
Rathnelly Ave	4							
Russett Ave	3							
Roxborough Ave., East	3							
Roxborough Ave., West	1	3						
Rosedale Rd			1	1				
Rusholme Rd	1							
Ritchie Ave	3							
Robinson	1							
Springhurst Ave	5	1						
Shaw	19	1						
Scott					1		1	

HOUSE SERVICES LAID DURING 1902.—*Continued.*

Name of Street.	Size of Services.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Spadina Rd	2	5	3					
Spadina Ave	1	3	1		2			
Simpson Ave	8							
St. Clarens Ave	26							
South Drive	1		3					
Shanley Ave	4							
Sherbourne	4		2	1				
Summerhill Ave	9							
Smith	9	1						
Shuter							1	
Strange	2							
Starr Ave		1						
Strachan Ave			1					
Sackville Pl	4							
Sumach	2	3						
Sully	2							
Surrey Pl					1			
St. Lawrence	1							
Sorauren Ave	4							
St. George			3	2				
Simcoe					2			
St. Helens Ave	2							
Spencer Ave	2							
Sussex Ave	2							
Sheridan Ave	1							
St. Albans	1							
Salem Ave	3							
Stephanie Pl				1				
Shaftesbury Ave	1							
St. Mary							1	
Spruce	1							
Sackville	2							
Sear			1					
St. Patrick	1							
Teraulay	3							
Temperance							1	
Turner Ave	1							
Trafalgar Ave	2							
University Ave	1						1	
Victor Ave	8							
VanHorne	2							
Vermont Ave	1							
Violet Ave	1							
Vankoughnet	1							
Wellington Ave	2		1					
Wellington, West				1				2
Withrow Ave	2		1					

HOUSE SERVICES LAID DURING 1902—*Continued.*

Name of Street.	Size of Services.							
	½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	6-inch.
Woodbine Ave	3							
West Lodge Ave	4							
Walker Ave	1	6						
Winchester	9	6	1					
Wells	13							
Waverley Rd	3	1						
Walmer Rd	5		2		1			
Westmoreland Ave	2							
West Ave	1		1					
West Marion	3							
Widmer	1							
Woodlawn Ave	3							
Wardell	2							
York	2							
Yonge	1							
Yorkville Ave	2							
Totals	1,019	128	74	45	36		15	10
SERVICES LAID ON ISLAND								
Cherokee Ave	1	1						
Hooper Ave	1							
Lakeshore Ave	2							

Total number of services laid during 1902—1,332.

SCHEDULE No 14.

Statement of House Services in Use to 31st December, 1902.

Total number of services in use previous to 1874						1,375
" " "	laid during 1874					552
Number of new "	" 1875					842
" renewed services	laid during 1875					24
" new	" "	1876 by permit				141
" renewed	" "	1876				12
" new	" laid by Commission	1876.				602
" renewed	" "	"	1876			258
" new	" "	"	1877			1,006
" renewed	" "	"	1877			161
" new	" "	Corporation	1878			2,189
" renewed	" "	"	1878			103
" new	" "	"	1879			1,861
" renewed	" "	"	1879.			97
" new	" "	"	1880			1,014
" renewed	" "	"	1880			41
" new	" "	"	1881			2,654
" renewed	" "	"	1881			117
" new	" "	"	1882			1,826
" renewed	" "	"	1882.			44
" new	" "	"	1883			1,766
" renewed	" "	"	1883			54
" new	" "	"	1884			2,087
" renewed	" "	"	1884			12
" new	" "	"	1885			2,344
" renewed	" "	"	1885			22
" new	" "	"	1886			2,936
" renewed	" "	"	1886.			19
" new	" "	"	1887			3,250
" renewed	" "	"	1887			65
" new	" "	"	1888			2,990
" renewed	" "	"	1888			65
" new	" "	"	1889			3,288
" renewed	" "	"	1889			68
" new	" "	"	1890			2,136
" renewed	" "	"	1890			55
" new	" "	"	1891			2,058
" renewed	" "	"	1891			53
" new	" "	"	1892			1,151
" renewed	" "	"	1892			49
" new	" "	"	1893			526
" renewed	" "	"	1893			2
" new	" "	"	1894			390

Number of renewed services laid by Corporation					1894	11
"	new	"	"	"	1895	319
"	renewed	"	"	"	1895	38
"	new	"	"	"	1896	291
"	renewed	"	"	"	1896	45
"	new	"	"	"	1897	474
"	renewed	"	"	"	1897	29
"	new	"	"	"	1898	504
"	renewed	"	"	"	1898	32
"	new	"	"	"	1899	664
"	renewed	"	"	"	1899	35
"	new	"	"	"	1900	683
"	renewed	"	"	"	1900	26
"	new	"	"	"	1901	1,133
"	renewed	"	"	"	1901	8
"	new	"	"	"	1902	1,319
"	renewed	"	"	"	1902	13
New services in Yorkville at time of annexation						448
"	"	Parkdale	"	"		885
Total number of services laid on Island						274

SCHEDULE No. 15.

NUMBER AND SIZE OF SERVICES IN USE TO DECEMBER 31ST, 1902.

	¼-in.	⅜-in.	½ in.	⅝-in.	¾ in.	1-in.	1½-in.	2-in.	2½-in.	3-in.	4-in.	6-in.	Total.
Services laid previous to 1875													1,927
New services laid, 1875			617	194	38	7	4	5		1			866
" " 1876			900	80	11	8	1	4	1	8			1,013
" " 1877			1,083	43	9	8		10		14			1,167
" " 1878	86	1,427	717	28	5	9		5		14	1		2,292
" " 1879		1,248	633	47	9	5		4		12			1,958
" " 1880		607	385	26	7	3		8		19			1,055
" " 1881		1,375	1,275	62	17	17		7		17	1		2,771
" " 1882		625	1,139	44	23	20		5		14			1,870
" " 1883		373	1,311	70	16	13		17		17	3		1,820
" " 1884		441	1,519	70	13	25		9		20	2		2,099
" " 1885		190	2,068	56	26	13		7		5		1	2,366
" " 1886		14	2,741	92	37	29		9		25		8	2,955
" " 1887		10	3,062	106	55	38		15		25		4	3,315
" " 1888			2,856	101	32	22		19		14	7	4	3,055
" " 1889			3,087	127	52	45		19		1	24	1	3,356
" " 1890			1,995	83	37	35		16			24	1	2,191
" " 1891			1,995	33	34	24		11			13	1	2,111
" " 1892			1,109	26	23	23		7			12		1,200
" " 1893			465	18	13	15		8			8	1	528
" " 1894			332	29	15	17		3			4	1	401
" " 1895			270	26	25	17		11			7	1	357
" " 1896			359	20	22	20		13			1	1	336
" " 1897			390	34	17	36		16			5	5	503
" " 1898			378	60	45	27		12		1	6	7	536
" " 1899			430	123	70	23		26		1	5	11	699
" " 1900			421	137	43	53		17			6	5	682
" " 1901			654	202	92	40		24			16	5	1,033
" " 1902			1,019	128	74	45		36			15	10	1,332
Totals	86	6,310	33,202	2,065	860	637	5	343	1	208	170	57	45,794

Total number of services on Island	274
Laid by Yorkville previous to annexation	448
" Parkdale " "	885
Total number of services	47,401

SCHEDULE No. 16.

Meters Taken off and Replaced During 1902.

Month.	½-inch.		⅝-inch.		¾-inch.		1-inch.		1½-inch.		2-inch.		3-inch.		4-inch.		5-inch.		6-inch.		Total.
	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	Off.	On.	
January	2	1	17	11	8	9	4	4	....	....	2	1	2	3	....	....	2	1	....	....	67
February	1	....	11	8	5	6	4	3	1	....	2	1	1	1	....	....	2	2	....	....	48
March	....	....	3	3	5	4	....	1	....	1	3	1	....	....	....	....	....	....	....	....	21
April	....	....	6	5	5	3	5	4	....	....	1	....	1	....	....	....	....	....	....	....	30
May	....	....	3	1	1	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	8
June	....	1	6	2	1	....	2	1	....	....	1	....	1	....	....	....	....	....	1	....	16
July	1	1	6	5	4	4	2	2	....	....	3	1	1	2	....	....	....	....	....	....	32
August	....	....	12	2	6	1	3	....	....	....	....	....	....	....	2	....	....	....	....	....	26
September	....	....	11	8	7	2	....	....	....	....	1	5	1	....	2	....	....	....	....	....	37
October	3	1	8	7	8	7	5	2	....	....	2	2	2	....	1	1	....	....	....	....	49
November	....	....	6	5	1	1	....	2	....	....	....	....	1	2	2	....	....	....	....	....	20
December	....	....	17	11	11	5	5	4	1	....	5	1	1	1	1	....	....	....	....	....	63
Total	7	4	106	68	62	44	31	23	2	1	20	12	11	9	8	1	4	3	1	....	417

SCHEDULE No. 17.

Meters Repaired without Removal from Services During 1902.

Month.	½-inch.	⅝-inch.	¾ inch.	1-inch.	1½-inch.	2-inch.	3-inch.	4-inch.	6-inch.	8-inch.	Totals.	New Boxes.	New Frames.	Frames and boxes repaired.
January.....	....	15	10	11	2	7	6	5	2	....	58	1	....	.....
February	....	8	17	14	2	13	6	2	5	....	67	...	....	1
March.....	1	18	9	8	2	7	2	3	8	....	58	6	1	7
April	....	17	7	11	....	7	5	7	10	....	64	9	....	4
May.....	2	25	17	24	2	10	7	4	8	1	100	5	2	1
June	....	13	6	10	....	11	3	2	5	1	51	5	2	4
July	2	17	16	16	3	4	2	2	7	....	69	9	3	2
August	1	13	10	12	2	4	1	1	2	....	46	3	4	3
September....	....	11	7	11	....	4	2	1	1	....	37	5	5	10
October	....	17	18	13	2	19	3	2	6	....	80	3	2	4
November	2	22	18	12	1	7	3	1	2	....	68	5	....	3
December	2	14	5	7	....	4	3	....	1	....	36	4	....	2
Totals....	10	190	140	149	16	97	43	30	57	2	734	55	19	41

SCHEDULE No. 18.

Size and Number of New Meters Placed During 1902.

½-inch.	⅝-inch.	¾-inch.	1-inch.	2-inch.	3-inch.	4-inch.	5-inch.	6-inch.	10-inch.	Total.
11	31	30	11	23	6	7	2	2	1	124

SCHEDULE No. 19.

RETURN OF TEMPERATURE OF WATER FOR YEAR 1902, TAKEN AT THE SHORE CRIB AND CITY HALL TAP.

Month.	Degrees Fahrenheit.					
	Shore Crib.			City Hall Tap.		
	Highest.	Lowest.	Average.	Highest.	Lowest.	Average.
January.	37	35	36.22	41	38	39.07
February	37	34	35.64	41	36	38.00
March	37	35	35.96	40	36	38.08
April.....	42	36	39.06	45	39	41.26
May	45	40	41.87	45	42	44.53
June..	47	41	43.00	48	43	45.16
July	52	41	46.25	56	43	49.11
August.....	60	42	51.22	61	48	53.24
September	63	41	52.5	64	46	54.36
October...	60	41	49.09	63	46	52.30
November	51	42	47.83	52	45	49.84
December.....	45	33	39.19	48	35	41.46
Averages of Year... ..	48.00	38.41	43.15	50.33	41.41	45.53

ANALYSIS OF TEMPERATURE.

Shore Crib.

The highest, on September 27th, 63 deg. ; the lowest, on December 16th, 33 deg. ; the highest average, in September, 52.5 deg. ; the lowest average, in February, 35.64 deg.

City Hall Tap.

The highest, on September 23rd, 64 deg. ; the lowest, on December 16th, 35 deg. ; the highest average, in September, 54.36 deg. ; the lowest average, in February, 38.00 deg.

SCHEDULE No. 20.

Maintenance and Distribution.

	House Services.								Services Cut Out.								Leaks on Mains.								Services moved to Suit Sidewalk.
	Leaks.	Burst Inside.	False Reports.	Blown Out.	Dug Out.	Cleaned Out.	On.	Off.	⅜-inch.	½-inch.	¾-inch.	1-inch.	1½-inch.	2-inch.	3-inch.	4-inch.	4-inch.	6-inch.	8-inch.	10-inch.	12-inch.	20-inch.	24-inch.	36-inch.	
January	164	46	12	11	83	33	18	66	1	..	..	..	..	..	..	..	..	4	..	..	5	..	1	1	
February	153	62	15	28	150	35	18	74	..	..	..	..	..	..	..	..	..	2	..	..	4	..	..	..	
March	167	29	10	17	137	21	18	45	..	2	..	..	..	..	..	..	..	12	..	..	6	1	..	..	
April	190	26	16	19	210	25	15	47	2	..	..	1	2	1	..	..	..	7	..	..	4	..	1	..	222
May	187	20	14	14	240	26	40	45	1	1	..	..	1	..	..	..	..	4	..	1	7	..	..	..	249
June	173	18	15	29	195	12	11	29	..	3	1	..	..	..	..	..	..	4	..	..	5	..	..	..	322
July	146	13	10	29	225	10	6	21	1	4	..	..	..	..	..	..	1	5	..	1	6	..	..	..	305
August	129	10	8	18	213	15	10	16	6	3	..	1	6	..	..	..	1	9	1	..	7	..	..	..	212
September	160	24	9	16	270	17	15	45	..	3	3	..	..	1	..	..	..	7	..	..	6	..	..	..	200
October	172	13	9	22	237	20	13	26	..	..	..	..	..	..	..	..	..	7	..	1	5	..	2	1	405
November	187	20	11	20	224	7	9	35	..	..	..	..	..	..	..	..	..	6	..	..	7	..	..	..	111
December	189	36	14	12	149	24	14	41	..	1	..	..	..	1	..	..	..	7	..	..	2	..	1	1	22
Totals	2,017	317	143	235	2,333	245	187	490	11	17	4	2	9	3	..	..	2	74	1	3	64	1	5	3	2,048

SCHEDULE No. 22.

STATEMENT OF QUANTITY OF WATER PUMPED, AND THE COST OF, PUMPING, FIGURED ON COAL, WAGES, MAINTENANCE AND INTEREST AND SINKING FUND.

Year.	Total Water Pumped. Imp. Gallons.	Total Fuel Pounds.	Cost of Fuel.	Wages.	Total Cost, including Repairs, Fuel, Wages, etc. Main Pump. Station.	Fuel. Cost per 1,000 Galls.	Fuel and Wages. Cost per 1,000 Galls	Fuel, Wages and Mainten'ce Cost per 1,000 Galls	Total Working Expenses, including Collection of Revenue.	Interest and Sinking Fund	Total Cost, including Fuel, Wages, Maintenance, Interest and Sinking Fund	Total Cost per 1,000 Galls. on same.
			$ c.	$ c.	$ c.	Cents.	Cents.	Cents.	$ c.	$ c.	$ c.	Cents.
1870	441,011,250											
1871	509,908,250											
1872	548,746,840											
1873	586,230,295											
1874	789,434,045											
1875	1,390,706,595	5,003,262	17,156 47	5,838 95	25,886 05	1.23	1.65	1.86				
1876	1,625,138,876	6,988,282	19,645 75	6,447 02	30,379 60	1.21	1.60	1.86				
1877	2,633,433,932	10,407,992	25,556 29	7,866 70	36,895 23	0.97	1.26	1.40				
1878	1,417,370,918	8,120,000	15,196 20	7,140 00	25,246 50	1.00	1.51	1.78				
1879	1,610,104,342	10,872,211	19,313 07	7,140 00	29,827 38	1.19	1.63	1.85				
1880	1,785,859,706	11,694,808	28,455 72	7,140 00	39,285 25	1.59	1.98	2.19				
1881	1,910,430,419	12,391,874	31.410 04	7,473 75	42,529 22	1.64	2.03	2.22				
1882	2,108,933,115	11,685,556	30,170 64	8,819 81	42,619 63	1.43	1.84	2.06				
1883	2,809,956,484	17,266,679	43,529 08	10,025 72	59,809 65	1.54	1.89	2.12				
1884	3,645,442,082	19,920,782	52,525 56	10,842 40	69,355 64	1.44	1.73	1.90	117,733 27	150,603 00	268,336 27	7.36
1885	3,537,482,598	18,644,465	46,589 27	12,017 85	65,082 39	1.31	1.64	1.84	104,530 50	151,614 00	256,144 50	7.24
1886	4,134,376,998	19,285,371	41,979 32	14,814 40	65 579 74	1.01	1.36	1.58	112,211 24	159,082 00	271,293 24	6.80
1887	4,417,938,169	23,283,900	50,051 85	16,968 79	76,597 16	1.13	1.51	1.73	130,175 09	163,337 00	293,512 09	6.64
1888	4,041,964,514	20,457,935	46,600 77	19,043 58	76,059 72	1.12	1.58	1.88	135,631 69	171,197 00	306,828 69	7.59
1889	4,148,781,634	19,231,940	44,135 10	20,192 39	75,360 77	1.06	1.54	1.81	161,567 81	181,104 00	342,671 81	8.25
1890	5,249,760,226	24,615,830	56,239 99	21,847 31	83,136 12	1.03	1.44	1.58	168,633 84	226,273 00	394,906 84	7.52
1891	6,534,375,161	29,300,240	60,012 77	22,556 49	89,060 35	0.90	1.24	1.36	182,854 12	226,273 00	409,127 12	6.26
1892	6,659,925,650	34,505.875	71,805 25	21,645 34	103,202 91	1.07	1.39	1.54	180,215 79	222,626 00	402,841 79	6.04
1893	6,646,021,488	26,013,840	64,702 86	27,078 65	100,013 77	0.97	1.37	1.50	188,481 70	224,732 00	413,213 70	6.21
1894	6,589,492,142	26,822,145	54,902 85	25,959 14	103,650 47	0.83	1.22	1.57	183,975 23	224,732 00	408,707 23	6.20
1895	6,639,680,218	21,178,879	40,221 85	23,305 49	75,502 63	0.66	1.01	1.13	148,908 06	224,732 00	373,640 06	5.62
1896	6,781,187,980	18,606,508	25,307 90	22,529 41	55,626 60	0.37	0.70	0.82	145,209 80	225,545 00	370,754 80	5.46
1897	6,723,757,030	20,711,250	26,880 50	22,933 92	57,093 25	0.39	0.73	0.84	141,954 80	225,545 00	367,499 80	5.46
1898	7,136,334,102	22,100,145	27,572 00	23,983 07	53,134 40	0.38	0.71	0.74	146,354 54	222,400 00	368,754 54	5.16
1899	7,824,348,217	24,682,935	26,684 57	24,770 54	71,279 65	0.34	0.65	0.90	162,185 19	222,400 00	384,685 19	4.91
1900	8,064,384,595	24,148,565	38,668 54	27,314 83	80,339 85	0.47	0.80	0.99	169,824 11	222,749 00	392,573 11	4.86
1901	8,299,298,465	26,272,640	39,562 56	28,295 43	78,234 31	0.47	0.81	0.94	171,683 97	222,749 00	394,432 97	4.75
1902	7,993,916,325	23,769,930	37,409 30	28,170 36	74,625 82	0.46	0.82	0.93	175,020 73	223,078 00	398,098 73	4.98

SCHEDULE No. 21.

Leaks on Mains During the Year 1902.

The following leaks on the mains were repaired during the year,—

36-inch	3
30 "	0
24 "	5
20 "	1
12 "	64
10 "	3
8 "	1
6 "	74
4 "	2
Total	153 of all sizes.

The total cost of repairing these leaks (less the cost of asphalt pavement repairs) was:

Labour	$ 854 92
Material	19 08
Total	$ 874 00

Average cost per leak (labor and material), $5.71.

Average number of leaks per mile of total distribution, 0.57.

Average cost per mile, $3,30.

ACCOUNTANT'S STATEMENT OF EXPENDITURE

FOR 1902.

ACCOUNTS.	$ c.	$ c.	$ c.
GENERAL WORKS.			
Asphalt cleaning	21,968 82		
Bridges, repairs and maintenance	9,128 06		
Cleaning gullies	4,908 48		
Engineering expenses	25,212 54		
General purpose	14,806 19		
Roadways	15,767 84		
Sidewalks	8,185 41		
Snow cleaning off sidewalks	6,510 52		
Street cleaning	39,389 19		
Scavenging	81,614 45		
Street watering	24,324 76		
Stone and wood crossings	1,428 25		
" " curbs	419 21		
Private drains	2,490 61		
	256,154 33		
Less am't paid Treas. for private drains	3,229 48		
		252,924 85	
SPECIAL WORKS.			
Asphalt repairs	13,322 59		
Coronation Day bon-fires	161 80		
Concrete mixer	510 00		
Construction of Island garbage destructor	109 40		
Drawback retained	1,872 39		
Dredging slips	7,405 04		
Don improvement, grading, etc	123 05		
Eastern stables, erection	1,268 85		
Eastern garbage destructor	1,711 13		
Fuel distribution	18,846 01		
Garnet Ave. sidewalk	13 37		
Harbor cribwork	15,241 45		
King Street sub-way, draining walls	2,130 69		
Level crossings	474 67		
Rentals	715 00		
Reconstruction of track	13,977 81		
Street Railway matters	1,091 00		
Sand pump	2,649 54		
Simcoe Park cinder path	82 47		
Street and house numbering	281 65		
Street cleaning, snow	10,699 14		
Carried forward	92,687 05	252,924 85	

ACCOUNTS.	$ c	$ c.	$ c.
Brought forward	92,687 05	252,924 85	
Sewer ventilation	58 86		
Stone, House of Industry	158 42		
Track allowance, reconstruction	6,048 49		
Yonge Street repairs, C.P.R. to City limits	1,129 35		
Wallace Avenue storm sewer	528 66		
Weed cutting	591 13		
Western garbage destructor	15,282 00		
		116,483 96	
BRIDGES, GRADINGS, OPENINGS, ETC.			369,408 81
Beatrice Street grading	529 05		
Lane opening between Front and Gerrard	1,555 30		
" " " Wellesley and Amelia	15 00		
Noble Street extension	1 03		
			2,100 38
Railway pavements			23,631 15
LOCAL IMPROVEMENT WORKS.			
Sewers		9,508 92	
Asphalt pavements	202,866 36		
Brick "	48,367 25		
Cedar block "	27,142 50		
Concrete "	782 22		
Macadam "	98,451 68		
Stone curbs	1,915 19		
		379,525 20	
Brick sidewalks	463 67		
Concrete "	122,812 44		
Wooden "	14,273 23		
		137,549 34	
			526,583 46
Personal and departmental accounts			57,700 42
			979,424 22
RAILWAY PAVEMENTS.			
Arthur Street, Dundas to Bathurst	1,627 73		
Avenue Road, C.P.R. to 1,232 feet north.	14 96		
Dundas, bridge to Bloor	4,721 61		
Dupont, Avenue Road to Walmer	14,872 50		
Dufferin, King to South	872 85		
Lansdowne, Bloor to Royce	189 30		
Parliament, Winchester to Howard	165 89		
Queen, Davies to Pape	839 25		
Spadina, Queen to College	681 61		
Sherbourne, Front to car sheds	36 70		
	24,022 40		
Less amount paid Treasurer	391 25		
		23,631 15	
Carried forward		23,631 15	979,424 22

ACCOUNTS.	$ c.	$ c.	$ c.
LOCAL IMPROVEMENT SEWERS.			
Barton Ave., Howland to Albany	574 67		
Beatrice, College to 224 feet north	810 32		
Bain Ave., Pape Ave. to Carlaw	129 29		
Custom House Lane, Yonge to Bay	95 92		
Colborne St.	945 86		
Duncan St.	761 31		
Davenport Rd., Dupont to 178 feet east of Bedford	209 47		
Gerrard St., Galt to Jones	66 45		
Galt, Gerrard to 795 feet north	156 14		
Gerrard, Jones to Leslie	931 56		
Golden Ave., 440 feet north of Dundas to railway fence	145 56		
Gladstone, 540 feet north of Dundas to 310 feet north	431 61		
Maude, Perth to West End	70 00		
McPherson Estate, east of Yonge	928 96		
Macdonell Ave., 134 feet north of Wright to 144 feet north	60		
Pendrith, Christie to 495 feet west	886 28		
Phipps, St. Vincent to 381 feet east	102 27		
Noble, Queen to 243 feet north	65 72		
Ritchie, Dundas to Hewson	50 77		
Russett, Bloor to north end	1,199 70		
Rosedale Rd., Cluny to Crescent	326 32		
" 240 feet north of Park Rd. to 200 feet north	15 50		
Sheridan, 106 feet north of Dundas to Moutray	340 16		
Sheridan, College to Moutray	248 46		
Summerhill, Yonge 739 feet east	115 95		
	9,608 85		
Less amount paid Treasurer	99 93		
		9,508 92	

LOCAL IMPROVEMENT ASPHALT PAVEMENTS.

Alexander, Church to MacMillan	2,385 53	
Albany, Bloor to Wells	10,966 40	
Bay St., King to Front	6,491 13	
Baldwin, 20 feet east of Spadina to Augusta	4,117 41	
Cottingham, Avenue Rd. to Rathnally	3,602 72	
College, Spadina to Bathurst	588 63	
Church, Queen to Bloor	52,094 16	
Elm, Sherbourne to Glen Rd.	6,010 21	
Fern, Sorauren to Roncesvalles	832 56	
Garden, McDonell to Sorauren	3,396 04	
Huron, Cecil to Baldwin	2,818 16	
Hayden, Church to east end	847 00	
Harvard, Callendar to Roncesvalles	5,621 02	
James, Albert to Louisa	170 81	
Louisa, Yonge to Teraulay	6,670 28	
Marlborough, Yonge to 1,338 feet west	5,650 00	
Morris, Huron to Spadina	3,175 63	
Maynard, 8 feet south of King to Leopold	2,699 21	
Markham, 759 feet south of College to Arthur	4,608 78	
Park Rd, Crescent to south of bend	5,033 78	
Phœbe, Spadina to Soho	4,982 67	
Spencer, Huxley to 189 feet south	1,588 67	
Sackville, Carlton to Winchester	3,081 70	
Soho, Queen to Phœbe	2,042 82	
Spadina, Queen to College	38,788 17	
" w.s., Baldwin to College	5,166 16	
" e.s., " "	6,946 12	
Simcoe, Queen to Caer Howell	65 72	
Walmer Rd. and Castle Ave	10,513 37	
Widmer, Adelaide to Richmond	2,014 79	
		202,969 65

LOCAL IMPROVEMENT BRICK PAVEMENTS.

Bellevue Ave., Oxford to College	339 90	
Cross St., Beaconsfield to Gladstone	2,458 13	
Carlton, Sumach to 399½ feet east	2,341 34	
Dovercourt Rd., Queen to Armour	5,054 16	
Duncan, King to Adelaide	4,512 79	
Huron, College to Bloor	2,620 75	
Hazleton Ave., Yorkville to Davenport	1,207 50	
Huntley, Earl to Isabella	155 81	
" Isabella to Bloor	723 29	
Grant, Queen to Kintyre	5,442 43	
Givens, College to Bloor	5,133 35	
Johnson's Lane, Adelaide to south end	102 07	
Carried forward	30,091 52	202,969 65

Brought forward	30,091 52	202,969 65
May, South Drive to 450 feet north	904 06	
Noble, Brock to 298 feet east	797 99	
Orde, Murray to McCaul	2,674 66	
Pearl, York to 633 feet east	3,811 21	
York, Pearl to Adelaide	1,965 68	
" King to Pearl	1,816 38	
" Adelaide to Queen	2,823 90	
William, Queen to Caer Howell	1,217 73	
Waterloo, Gladstone to Dufferin	2,264 12	
		48,367 25

LOCAL IMPROVEMENT CEDAR BLOCK PAVEMENTS.

Borden, Ulster to Bloor	313 14	
Bulwer, Soho to Spadina	1,077 25	
Concord, Dewson to 180 feet s. of Hepbourne	3,019 68	
College, Bathurst to Lansdowne	9,008 01	
Dean, Wilton to 204 feet north	415 34	
Delaney Crescent, Brock to Wyndham	1,591 21	
Givens, Argyle to Halton	104 90	
Margueretta, Dundas to Bloor	593 00	
Manning, Robinson to Arthur	3 00	
Middleton, Brock to Sheridan	851 76	
Palmerston, Robinson to Arthur.	209 30	
Ossington, College to Bloor	549 00	
Pearson, Sorauren to Roncesvalles	230 00	
Queen, G.T.R. to Pape	508 19	
Shaw, Arthur to College	292 28	
Sumach, King to Gerrard	496 04	
St. Clarens, College to Bloor	4,195 79	
Trinity, King to Mill	211 80	
Tecumseth, Queen to Walnut	446 96	
Wyndham, Brock to St. Clarens	1,137 65	
Wardell, DeGrassi to Sewell Ave.	1,888 20	
		27,142 50

LOCAL IMPROVEMENT MACADAM PAVEMENTS.

Allen Ave., Broadview to Bolton	2,764 64	
Breadalbane, Yonge to St. Vincent	983 51	
Brock, Dundas to 1,000 feet south of Bloor	543 04	
Balmuto, Bloor to Czar	8 87	
Beatrice, College to 422 feet north	494 22	
Crescent Rd., Scarth to Crescent	7,331 62	
Caer Howell, University to Caer Howell	689 02	
" McCaul to Simcoe	833 56	
Cawthra Sq., Jarvis to west end	84 92	
Davenport Rd., Hazleton to Avenue Rd	2,070 40	
Carried forward	15,803 80	278,479 40

Brought forward	15,803 80	278,479 40
De Grassi, Queen to Gerrard	4,610 52	
Draper, Front to Wellington Pl	1,737 67	
Dale, Glen to McKenzie	5,470 07	
Earnbridge, Strickland to 100 feet west	22 90	
Elmsley Pl., St. Joseph to 323 feet north	895 44	
Elm Ave., Glen Rd. to Nanton Cresc	752 46	
Glen Rd., the bridge to Maple.	2,102 42	
Grange Rd., Beverley to Huron	559 43	
Hayden, Yonge to Church	2,232 86	
Howland Rd., Gerrard to Langley	3,506 31	
Huron, Bernard to Dupont	349 89	
Isabella, Yonge to Jarvis	661 94	
Logan, Queen to Gerrard	8,236 55	
Lansdowne, Bloor to Royce	15,783 10	
" Royce to City bmits	764 98	
Mutual, Wilton to Gould	1,787 57	
Noble, Queen to 100 feet west of Strickland	165 30	
McKenzie Ave, Dale to Castle Frank	3,506 66	
McPherson, Avenue Rd. to 629 feet 7 inches east	2,211 19	
Nanton Cresc., Dale to Elm Ave.	848 08	
Munro, Queen to Gerrard	6,036 89	
O'Hara Ave., 653½ feet, n. of Marion to 150 feet north	456 18	
Parliament, King to Mill	291 90	
River, Queen to Gerrard	6,018 51	
River, Gerrard to Spruce	78 50	
St. Albans, Yonge to Surrey Place	1,598 61	
South Drive, Park Drive to Huntley	1,117 74	
Smith, Broadview to Logan	3,413 56	
Simpson, Broadview to Howland	361 44	
St. Joseph, St. Vincent to 398½ feet west	296 68	
Sully, Arthur to College	405 40	
Shuter, Yonge to Sherbourne	691 07	
York, Front to 318 feet south	2,330 20	
Wilton, Sherbourne to Parliament	591 03	
Walton, Yonge to Elizabeth	1,774 37	
Wellesley Ave., Wellesley to 249 feet north	397 50	
Wells, Kendall to Bathurst	278 20	
Wellesley Pl., Wellesley to north end	304 76	
		98,451 68
STONE CURB.		
York, e.s., King to Queen	769 86	
" w.s, " "	710 20	
Dunbar Rd., e.s., Elm to South Drive	435 13	
		1,915 19
Carried forward		378,846 27

Brought forward		378,846 27
CONCRETE.		
Lane 1st s. of King, Church to west end		782 22
		379,628 49
Less amount paid Treasurer for sundry pavements		103 29
		379,525 20

LIST OF LOCAL IMPROVEMENT CONCRETE WALKS.

Albany Ave., w.s., Bloor to Wells	1,170 59	
" e.s. " Barton	2 70	
Agnes, s.s., Centre to Chestnut	321 39	
Bloor, n.s., 97 feet west of Yonge to Avenue Road	1,190 68	
Beatrice, b.s., College to 422 feet north	484 32	
Bernard, s.s., Madison to Spadina Rd.	329 84	
Berkeley, e.s., Carlton to 529 feet south	335 70	
Bellair, w.s., Cumberland to Yorkville	319 14	
Beverley, e.s., Darcy to 132 feet 9 inches south of Baldwin	137 66	
Booth, e.s., Queen to Jemima	1,264 80	
Brooke, n.s., Howland to Logan	521 93	
Bellevue, e.s., Bellevue Pl. to Oxford	1,106 48	
Bedford, e.s., Bernard to Davenport	208 79	
" e.s., Bloor to Lowther	439 34	
Balmuto, w.s., Bloor to Czar	323 43	
" e.s., " "	379 02	
Bolton, w.s., Queen to Gerrard	1,464 37	
Bleecker, w.s., Carlton to Wellesley	818 52	
Beverley, e.s., Queen to Grange	662 85	
Bernard, s.s., Bedford to 141 feet west	113 60	
Bedford, w.s., Lowther to Bernard	551 64	
Bay, e.s., Front to Esplanade	47 92	
Bellwoods, e.s., Mansfield to Treford Place	202 29	
Booth, w.s., Queen to Natalie	525 22	
Bloor, s.s., Yonge to Queen's Park Crescent	1,360 80	
Bulwer, s.s., Soho to Spadina	317 01	
Brock, e.s., Dundas to College	412 36	
Bank, n.s., Dufferin to Sheridan	506 76	
Bolton, e.s., Queen to Gerrard	2,270 80	
Coolmine Rd., w.s., Dundas to St. Anne's	437 96	
Clinton, e.s., Harbord to 385 feet north	332 95	
Church, e.s., Queen to 405 feet 10 inches north	348 43	
Court, n.s., Church to 107 feet west	172 07	
Clarence Sq., n. & n.e., Spadina to Wellington	367 19	
Carried forward	19,448 55	

Brought forward	19,448 55
Crescent Rd., w.s., south of No. 185 to east of No. 151.	230 35
" n.s., Scarth to Lamport	35 08
Church, e.s., Shuter to 527 feet south of Carlton	1,595 64
" " 167½ feet north of Carlton to Alexander.	319 14
" w.s. Wellesley to Bloor	1,292 23
College, n.s., Huron to Spadina	28 37
Church, e.s., King to Adelaide	85 43
College, s.s., Elizabeth to Mission.	89 70
Carlton, s.s., Sackville to Gifford.	287 34
" " Sumach to 399½ feet east	279 44
Carlaw, w.s., Eastern to 1,057 feet south	1,084 67
Crawford, e.s., 126 feet n. of Queen to 680 feet north.	339 08
Czar, n.s., Yonge to Balmuto	188 49
Carlaw, w.s., Queen to Eastern	1,002 90
Crescent, n.s., Scarth north to Cluny	825 92
Crawford, e.s., Queen to 109 feet north	64 14
Crescent Rd., n.s., opposite Nos. 162 and 166	124 62
Cowan, b.s., King to Huxley	2,184 07
Dunn Ave., e.s., King to G.T.R.	1,841 72
" w.s., " "	1,737 00
Dovercourt Rd., w.s., McKenzie Cresc. to Dundas	693 07
Deleware, w.s., Hepbourne to Bloor	569 67
Dunn, w.s., King to Queen	1,251 16
" e.s., " "	1,319 30
Davenport, n.s., Hazelton to Avenue Rd	214 19
Dowling, w.s., King to Queen	620 00
" e.s., " "	608 83
Duke, n.s., Jarvis to Sherbourne	280 30
Dufferin, w.s., Melbourne to G.T.R.	1,259 40
Elmsley Pl., b.s., St. Joseph to 323 feet north	262 17
Elm Grove Ave., w.s., Melbourne to Queen	618 44
Elm Ave., s.s., Glen Rd. to Nanton	505 11
" s.s., Sherbourne to Glen Rd	413 34
Earl, n.s., Sherbourne to Huntley	399 92
Elm, s.s., Yonge to Teraulay	643 28
Elm Grove Ave., w.s., King to Melbourne	588 70
Elliott, n.s., Broadview to Bolton	504 07
Euclid, w.s., Ulster to Bloor	1,355 67
Front, s.s, Bay to 115 feet,7 inches w. of Yonge	58 64
" " Yonge to Scott	42 79
" n.s., in front of Nos. 10, 12, 14 and 16	20 31
First Ave., n.s., DeGrassi to Logan	588 26
Front, s.s., Lorne to 311 feet 6 inches west	252 74
First Ave., n.s., Logan to 157 feet west	199 29
Carried forward	46,352 54

Brought forward	46,352 54
Front, n.s., Princess to Berkeley	343 00
George, e.s., Wilton to Gerrard	1,472 27
Glen Rd., e.s., Maple to 56 feet north	39 40
Grange, n.s., Denison to Hackney	281 29
George, e.s., Wilton to Gerrard	1,149 49
Gould, s.s., Church to Dalhousie	200 05
" n.s., Church to Mutual	36 90
Gwynne, w.s., King to Queen	1,161 01
" e.s., " "	1,201 63
Harrison, s.s., Dovercourt to Lakeview	491 04
Huntley, e.s., Earl to Isabella	235 94
Harbord, n.s., Bathurst to Markham	157 48
Hamilton, e.s., Paul to Elliott	708 29
Huron, w.s., D'Arcy to 149 feet north	148 43
" e.s., College to Russell	432 01
" " Bernard to Dupont	565 99
" w.s., Division to Russell	221 40
Howie, e.s., Clarke to 468 feet north	233 81
Hayter, s.s., Yonge to Teraulay	849 99
Jarvis, w.s., King to 522 feet s. of Adelaide	677 45
Jameson, e.s., King to Queen	701 76
" w.s., King to G.T.R	673 23
King, n.s., Sumach to St. Paul	342 07
" " Sherbourne to Princess	621 24
" " 23 feet east of George to Sherbourne	1,019 36
" s.s., Dufferin to Dowling	2,152 03
" " Niagara to Walnut	187 87
" n.s., Wilson to Queen	1,062 38
" " 39 feet east of Princess to Berkeley	1,566 15
" s.s., George to Frederick	521 77
" " Stafford to Strachan	193 46
" " Trinity to 65 feet east	168 82
Linden, s.s., Huntley to 73 feet north of Sherbourne	300 56
Logan, w.s., 2 feet north of G.T.R. to Gerrard	509 01
" " Queen to G.T.R	979 86
Lowther, n.s., Bedford to Admiral	175 24
Lakeview, w.s., Dundas to Harrison	292 94
Morse, e.s., Eastern to 1,095 feet south	659 90
Mansfield, s.s., Claremont to Bellwoods	228 39
Murray, e.s., Caer Howell to Orde	855 06
Manning, w.s., Harbord to 836 feet north	496 03
Madison, e.s., Bernard to Dupont	573 69
" w.s., " "	546 62
Maynard, e.s., King to Leopold	320 64
" w.s., " "	307 13
Carried forward	72,405 62

Brought forward	72,405 62
Maple, n.s., Glen to 256 feet east	179 92
McGill, s.s., Yonge to 197 feet east	315 25
" n.s., Yonge to Church	1,063 80
Northumberland, n.s., Delaware to Dovercourt	312 08
Ontario, w.s., Gerrard to Carlton	876 85
" e.s., Carlton to Winchester	41 54
Oak, n.s., Sackville to Sumach	863 83
Ontario, e.s., Gerrard to Carlton	861 37
" " Wilton to Gerrard	1,250 97
O'Hara, " Queen to Maple Grove	499 38
Phoebe, n.s., Spadina to 291 feet east of Huron	493 27
Parliament, e.s., Winchester to Amelia	434 01
Prince Arthur Ave., s.s., Avenue Rd. to Bedford	84 59
Peter, w.s., Queen to King	1,343 30
Parliament, w.s., first lane north of Wilton to Carlton	1,075 05
" e.s., Wilton to Orford	284 12
Park Rd., b.s., South Drive to Crescent Rd	801 50
Parliament, e.s., Queen to St. David	1,112 83
" w.s., Wellesley to Howard	711 42
Queen, n.s., University to Chestnut	114 88
" n.s., 82 feet east of Lansdowne to West Lodge	442 40
" s.s., Ontario to Parliament	1,018 50
" " 23 feet east of Sherbourne to Ontario	881 61
" " St. Paul to Sumach	232 80
" n.s., Sumach to River	544 09
" s.s., Bathurst to Tecumseth	1,190 26
Queen's Park Crescent, e.s., St. Alban's to 529 ft. south	370 89
Queen, n.s., Crawford to 46 feet east of Dundas	1,919 48
" s.s., Pape to 73 feet west	167 51
" n.s., Bellwoods to 200 feet east of Crawford	1,654 47
" " River to 418 feet east	357 69
Robert e.s., Sussex to Bloor	477 99
" " Harbord to Sussex	409 68
" " Willcock to Harbord	391 60
Richmond, e.s., Yonge to Victoria	31 56
St. Clarens, b.s., College to Bloor	5,566 56
Shuter, n.s., Yonge to Church	639 82
South Drive, s.s., north of South Drive to Dunbar Rd.	101 23
Spadina Crescent, w.s., Spadina south to Spadina north	449 34
Selby, s.s., Sherbourne to Huntley	419 98
Shuter, n.s., Sherbourne to George	61 15
Sackville, w.s., Gerrard to Spruce	329 83
Soho, b.s., Queen to Phoebe	946 23
Carried forward	103,700 25

Brought forward	103,700 25
St. George, w.s., Bernard to Dupont	618 23
Sherbourne, " Queen to Wilton	949 30
Shuter, n.s., Jarvis to Church	452 95
Sullivan, " Beverley to Huron	669 26
Sword, e.s., Gerrard to Spruce	263 89
Spadina, e.s., Front to King	585 06
Spadina Rd., e.s., Bernard to Dupont	584 62
Spencer, w.s., Huxley to 189 feet south	281 31
" e.s., " " "	271 72
Sackville, w.s., Carlton to Winchester	314 22
Simpson, n.s., Broadview to Howland	1,002 28
Sussex, s.s., Spadina to Robert	309 66
Sydenham, s.s., Sackville to Sumach	833 13
Smith, s.s., Broadview to 65 feet east	228 20
St. Andrews, s.s., Spadina to Kensington	553 57
Sydenham, s.s., Berkeley to Parliament	411 64
South Drive, s.s., Glen Rd. to 132 feet east	152 77
Teraulay, w.s., Gerrard to 84 ft. south of College.	915 39
Tyndall, w.s., King to Springhurst	1,000 39
Teraulay, " Queen to 32 feet north	85 46
Tecumseth, e.s., Queen to Defoe	436 43
Victor, n.s., Broadview to Logan	1,265 85
Victoria, w.s., 125 feet 5 inches north of Adelaide to Richmond	52 90
West Market, w.s., King to Front	86 55
Winchester, s.s., Ontario to Parliament	493 64
Wilton, s.s., Sherbourne to Seaton	279 06
" " Ontario to Reed's Lane	194 41
Wellesley, n.s., Jarvis to Homewood	350 61
" s.s., Wellesley to 249 feet north	616 73
" n.s., east of No. 444 to 124 feet east of Parkview	143 04
Winchester, n.s., Rose Ave. to Parliament	203 75
West Market, w.s., Esplanade to Front	485 41
Wilton, n.s., Seaton to Ontario	193 92
Wellesley, n.s., Ontario to 38 feet west of Rose Ave.	145 97
Willcock, s.s., Spadina to Robert	269 70
Wellington, n.s., John to 106 feet east of Dorset	217 46
Wellesley, n.s., Church to Jarvis	34 50
William, n.s., Queen to Caer Howell	197 74
Wellington, s.s., 98 feet 10 inches east of York to 164 feet 4 inches west of Bay	77 74
Carried forward	119,928 71

Brought forward	119,928 71		
York, w.s., Queen to 5½ feet north of King	1,532 53		
" e.s., " " "	1,449 52		
Yonge, w.s., Bloor to Yorkville	114 47		
	123,025 23		
Less amount paid Treasurer for sundry walks	212 79		
			122,812 44

LOCAL IMPROVEMENT BRICK SIDEWALKS.

Cameron, w.s., Queen to Cameron Place	64 00		
Sherbourne, e.s., Bridge to Ancroft Pl	188 77		
" " Ancroft Pl. to South Dr	210 90		
			463 67

LOCAL IMPROVEMENT WOODEN SIDEWALKS.

Adelaide, s.s., Portland to Bathurst	189 28		
Albany, e.s., Dupont to 858 feet south	226 16		
Adelaide, b.s., Spadina to Bathurst	55 69		
Brighton, s.s., Pape to east end	108 51		
Bartlett, e.s., Bloor to Hallam	1,174 12		
Booth, e.s., Eastern to 1,110 feet south	391 00		
Bank, s.s., Sheridan to Dufferin	318 26		
Brock, e.s., Bloor to 150 ft. 6 in. south of north end	344 14		
" w.s., Bloor to north end	411 46		
Concord, w.s., College to Hepbourne	695 41		
Coxwell, w.s., Queen to 200 feet north	55 50		
Caroline, w.s., Avenue Rd. to Eastern	310 57		
Chicora, n.s., Avenue Rd. to Baptist Campus	110 96		
Cumming, s.s., Bolton to DeGrassi	57 36		
Claremont, e.s., Arthur to Mansfield	365 30		
Campbell, w.s., Irving to Wallace	1 68		
Clarke, s.s., Bolton to Grant	110 92		
Delaware, e.s., Bloor to Van Horne	855 97		
" w.s., Northumberland to Van Horne	836 85		
Davenport, s. & w., Avenue Rd. to Dupont	1 70		
Duchess, n.s., Ontario to Sherbourne	7 75		
Eastern Ave., s.s., Carlaw to Morse	187 96		
Elliott, s.s., Broadview to Munro	102 21		
Esther, b.s., Queen to St. Patrick	43 70		
Elliott, n.s., Broadview to Munro	116 13		
George, e.s., Queen to Britain	144 21		
Gildersleeve, n.s., Sumach to 402 feet east	102 55		
Garnet, s.s., Christie to West end	359 37		
Garden, s.s., McDonell to Sorauren	55 12		
" n.s., " "	29 80		
Givens, e.s., Bloor to 558 feet south	136 82		
Carried forward	7,906 46		

Brought forward	7,906 46	
Hamilton, w.s., Paul to Gerrard	438 82	
Hallam, s.s , Dovercourt to Westmoreland	101 78	
Leslie, w.s., Queen to Sproatt	473 17	
Lansdowne, w.s., Dundas to Wallace	227 04	
Leslie, w.s., Queen to 97 feet south	77 62	
Logan, e.s., Eastern Ave. to 954 feet south	315 39	
Manchester, s.s., Shaw to Ossington	328 98	
McMaster, n.s., Avenue Rd. to 247 feet west	77 39	
Northumberland, n.s., Ossington to Preston	107 28	
Ossington, e.s., Bloor to Manchester	488 47	
Ontario Place, s.s., Ontario to West End	60 20	
Pears, n.s., Avenue Rd. to 633 feet east	271 43	
Palmerston, e.s., Barton to Follis	206 77	
Queen, s.s., Eastern Ave. to 597 feet east	233 37	
" " Logan to 65 feet east	40 44	
River, e.s., Oak to Bell	125 66	
Shirley, s.s., Brock to St. Clarens	326 06	
Sully, w.s , Bloor to 1,050 feet south	285 47	
Smith, s.s., Pape to 102 feet east of Poucher	59 47	
Summerhill, s.s., Yonge to Ottawa	364 67	
Sheridan, e.s., Bank to 324 feet north	188 49	
Sumach, w.s., 69 feet north of Wilton to Gerrard	395 24	
Sylvan, n.s., Dufferin to 215 feet east of Gladstone	232 53	
Shaw, e.s., College to Bloor	775 09	
Shaftesbury, n.s., Ottawa to Summerhill	122 14	
Victor, s.s., Logan to Lot 10	50 58	
Wellington Place, b.s., Spadina to Portland	36 20	
Walker, s.s., No. 67 to West end	216 50	
Waverley, e.s., Queen to 625 feet south	324 22	
Wyndham, n.s., Brock to St. Clarens	245 43	
Wardell, w. & n., DeGrassi to South Ave	325 31	
Woodbine, e.s., Queen to 200 feet north	43 84	
	15,471 51	
Less amount paid Treasurer for sundry walks	1,199 28	
		14,272 23
		$979,424 22

WATER WORKS DEPARTMENT

Maintenance.		
Maintenance of distribution	22,435 88	
Meter and machine and blacksmith's shop	13,406 62	
Main Pumping Station	35,604 17	
" " (coal)	45,402 25	
Store house	1,975 62	
Hydrants and valves	5,429 24	
Reservoir	4,841 58	
High Level Station	10,511 93	
Cartage	4,234 00	
Miscellaneous	361 39	
Inspection and examination of conduit	324 27	
Island Water Works	614 68	
		145,141 63
Construction.		
House services	14,347 62	
Short lengths and extra fire hydrants	1,084 22	
		15,431 84
Renewals.		
House services		6,836 76
Special Services.		
Gerrard St. 12-inch main	1,805 26	
Resetting boilers of No. 1, 2 and 3	488 68	
New boilers to replace No. 1	8,304 54	
Combined horse troughs and drinking fountains	243 04	
Extension Jefferson Avenue and Liberty St. main	1,439 65	
New tubes for boilers	121 35	
Flooring east coal shed	963 39	
Repairs to No. 1 & 2 Engines	101 99	
Steam pipe between old and new Engine House	1,210 90	
Jones' underfeed stokers, Main Pumping Station	3,268 00	
New meters	2,410 80	
		20,357 60
		187,767 83
Revenue Mains.		
Ashport Ave., Queen to 200 feet north	164 58	
Bedford Rd. w.s., Davenport to 318 feet north	335 84	
Brock Ave., extension to 108 feet north	88 64	
Barton Ave.	45 80	
Beatrice St., College to 432 feet north	569 00	
Campbell Ave.	856 18	
Carling Ave., Bloor to 200 feet north	243 74	
Carried forward	2,303 78	187,767 83

Brought forward	2,303 78	187,767 83
Cluny Ave., Crescent Rd. to 750 feet east	24 54	
Chicora Ave., extension 150 feet west	232 61	
Clinton St.	55 15	
Dawson Ave., Dunedin to 140 feet east	118 48	
Duncan St., 200 feet through old Upper Canada College Grounds	288 28	
Danforth Ave.	1,257 82	
Don Improvement, Eastern Ave. to 450 feet north	448 07	
Danforth Ave., extension 400 feet east	434 43	
Edgedale Rd., Howard to 245 feet north	156 62	
Empress Crescent	19 07	
Elm Ave., Nanton to 150 feet west	139 89	
Gorevale Ave., Arthur to 255 feet south	163 00	
Greenwoods Ave., extension 5,000 feet north	3,536 97	
Gladstone Ave., extension 168 feet north	124 39	
Hogarth Ave., extension 500 feet east	420 30	
Hammersmith, Queen to 170 feet north	4 63	
Hepbourne St., Rusholme Rd. to 220 feet east	8 74	
Havelock Ave., extension 250 feet north	71 93	
Kenilworth Ave., Queen to 1,250 feet south	1,210 63	
Kippendavie Ave., Lakeshore to 500 feet north	284 83	
Laxton Ave., Jamieson to 350 feet west	380 28	
Lucas St., extension 300 feet west	8 65	
Lowther Ave., Howland to 180 feet west	92 25	
Lansdowne Ave., Wallace to 500 feet north	467 81	
Lee Ave.	18 04	
McPherson Ave.	551 64	
Pendrith, Christie to 312 feet west	413 45	
Prince Arthur Ave., Huron to 450 feet west	16 36	
Phipps St., St. Vincent to 180 feet east	63 75	
Ruskin Ave., extension 190 feet west	132 59	
Ritchie Ave., " 320 feet north	8 22	
Roxborough Ave.	375 05	
Shanley Ave., Hamburgh to 130 feet east	95 83	
Sackville St., Bowman to 110 feet east	56 86	
Severn St	8 98	
Spadina Rd., extension 185 feet north	322 19	
Strange St., " 150 feet south of G. T. R. tracks	118 49	
Symington Ave.	894 83	
Sear St., Lake St. to 190 feet	48 23	
Simpson Ave., extension 205 feet east	140 12	
Shaw St.	5 53	
Carried forward	15,523 31	187,767 83

Brought forward	15,523 31	187,767 83
St. George St., extension 200 feet north	185 87	
Violet and Leuty Ave.	660 06	
Victoria Crest., extension 400 feet west.	380 78	
VanKoughnet St., Borden to 200 feet west	122 95	
Withrow Ave., Logan to 400 feet east	97 18	
Worts Ave., Cherry to 200 feet east	5 71	
Woodbine Ave., Queen to 150 feet north	28 00	
Wallace Ave.	61 13	
	17,064 99	
Credit, Royce Ave., extension 630 feet east	111 29	
		16,953 70
		204,721 53

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Toronto. Dept. of Public Works
Report of the city engineer

[redacted]

Engineering

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